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THE EXAMINATION

OF

A REJECTED CANDIDATE

AT THE

ROYAL COLLEGE OF PHYSICIANS

OF LONDON,

DECEMBER 21ST, 1848.

BY

EDWARDS CRISP, M.D., M.R.C.S., L.A.C.

MEMBER AND LATE ONE OF THE COUNCIL OF THE PATHOLOGICAL AND MEDICAL SOCIETIES OF LONDON; MEMBER AND LATE ONE OF THE PRESIDENTS OF THE PHYSICAL SOCIETY OF GUY'S HOSPITAL; AND ONE OF THE VICE-PRESIDENTS OF THE SOUTH LONDON MEDICAL SOCIETY.

LONDON:

JOHN CHURCHILL, PRINCES STREET, SOHO.

MDCCCXLIX.

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PREFACE.

READER, if you have seen the title of this pamphlet you have probably come to the conclusion that the author must be a conceited, and disappointed man. But hear my story (I address myself especially to the general practitioner), and then judge for yourself. The correspondence will tell you the first part of the affair; the examination, which I know is *substantially*, and I believe almost *verbally*, correct, the end of it. I took the printed paper to a medical friend each day, after the examination, and told him how I had answered the questions. *Notes were taken of the verbal pathological examination* (Dec. 21st), *as soon as I left the College, and nearly all of it was written before I slept. Both verbal examinations* were finished on the following day, and left with the gentleman alluded to.* The reader may think that I have introduced several circumstances that are trivial and unimportant, but I must remind him that the examination is to be judged of as a whole, and that a correct estimate cannot be formed by selecting particular parts. He must also bear in mind that only six hours

* These papers can be seen by any one.

were allowed for the written examination, and that some of the subjects, Pneumonia, and Peritonitis, for example, if properly treated, would each require a much longer period. In the verbal examinations, before one subject was finished another was often begun, and in the pathological examination many of the questions were extremely indefinite. There is one part of the communication I would gladly blot out from these pages,—the subject is a painful one, but the reader must perceive that it forms an important and essential feature in the narrative.

But you will naturally ask, what good will this publication do to yourself or to anybody in the profession?

As regards myself, if I desire notoriety, the step I have taken will ensure it. If I wish to make enemies, I shall effect my object. If I desire sympathy, I shall probably get it from some; and if I court ridicule, I shall have abundance of it from others. Perhaps I scarcely know my own motives; but I fear they are selfish ones. I feel that I have been wronged, and I am anxious to be judged by my brethren; and should they pass an unfavorable sentence upon me; should they point to this publication hereafter, as a record of arrogance and folly; I still think it may do some good to the profession at large. It may show at a future period, when our strut upon the stage is finished, and many of the idle and visionary theories that we now cling to, have passed away, that a great deal of what we now call practical experience and wisdom, is only practical error. It will enable the physician who thirty years ago passed a "practical" examination in Latin, to make an interesting comparison. It may serve as a beacon to the general practitioner. It

should teach him that unless he belong to a certain clique, and his political opinions are shaped after a certain model, that he had better not covet College honours; and it may lead some who have been hitherto indifferent about the matter, to think that all medical and surgical examinations should be conducted in public; and by men who are elected by the general body.

And lastly, one word to the Examiners. If they collectively or individually should "graciously" condescend to notice this publication, let them not deal in general assertions; let them keep to fixed and tangible points, so that I may not have to grapple with shadows. And let them especially explain *why my papers were burnt on Monday, and why they told me on Wednesday that they were satisfied with my examination, when it is expressly stated in their Laws, that the papers of the successful candidates shall be preserved?*—"Hisce quæstionibus responsa, ut literis illicò mandentur, et inter annales nostros conserventur, curet Registrarius."

CORRESPONDENCE, &c.

1.

Copy of a Letter to Dr. Todd.

Houbridge Hall, Great Oakley, Essex;
March 2, 1848.

My dear Sir,—I trust you will excuse the liberty I take in troubling you about a matter which just now interests me a good deal. I left general practice in December last, and intended, after spending some months at the Continental schools, to become a Licentiate of the College of Physicians, believing,—and I judged from the printed laws,—that I was eligible for examination. I learn from Mr. Sedgwick, that there is some doubt as to whether I can be admitted to examination, as I attended the medical practice of a dispensary *only:* although I have been at the Borough Hospitals for many years, and also studied for several months (after passing the Hall and College) at the Hospitals in Paris. If you can furnish me with the required information, you will much oblige,

Yours, very faithfully,
Edwards Crisp.

R. B. Todd, Esq., M.D.

2.

3, New Street, Spring Gardens;
March 2, 1848.

My dear Sir,—As a general rule, the College never dispenses with the law requiring three years' attendance on hospital practice. I am not sure, however, whether you may not be admitted under the by-law affecting those beyond forty. Your best course is to address a letter to the Registrar, stating your case, and requesting it to be brought before the Censors' Board; and if you like to give me any verbal explanation,* I shall be happy to see you here any morning before twelve, and it will give me great pleasure if I can work the way for the attainment of your object.

Believe me, my dear Sir, yours, faithfully,
R. B. Todd.

Edwards Crisp, Esq.

* I did not call upon Dr. Todd, nor did I see him until the first day of the examination.

3.

Copy of a Letter to FRANCIS HAWKINS, ESQ., M.D. *Registrar of the College of Physicians.*

2, Charlotte Row, Walworth;
March 6, 1848.

SIR,—May I take the liberty of requesting you to bring the following matter before the Censors' Board:

I left general practice last December, supposing that I could be admitted to examination for the license of the College of Physicians, and I formed this opinion from the inclosed by-law.* I am forty years of age; I have been about the Borough Hospitals for several years, and after passing the Hall and College I spent several months at the Paris Hospitals, but I only entered to the medical practice of a dispensary (Surrey). Mr. Sedgwick, to my surprise, informed me, a few days since, that I must have attended hospital practice in this country before I can be admitted to examination. If you can, at your earliest convenience, give me a direct answer to this question, you will much oblige,

Yours, very respectfully,
EDWARDS CRISP.

Francis Hawkins, Esq., M.D., Registrar to the College of Physicians.

4.

18, Bolton Street, Piccadilly;
March 7, 1848.

SIR,—In reply to your letter, I can only say that no person can be admitted to examination for the license or extra-license of the College of Physicians, unless he can prove satisfactorily that he has attended the physician's practice of a general hospital, containing 100 beds, during three years, one year of which, at the least, must have been at a British hospital, as you may learn from the inclosed "Excerpta," from the Statutes of the College, which have been printed and circulated

* "Candidates who have already been engaged in practice, and have attained the age of forty years, but have not passed through the complete course of study above described, may be admitted to examination upon presenting to the Censors' Board such testimonials of character, general and professional, as shall be satisfactory to the College." ✕

This was copied from the 'London Medical Directory.'

* Sent by the College.

during many years. There can be no exemption from this, except, indeed, under the special circumstances specified in § 13 of the same paper: "§ 13. Quandoquidem fieri potest ut viri sint quidam de arte nostrâ optimè meriti, qui tamen disciplinæ medicæ studia non omnino secundum normam a nobis injunctam prosecuti fuerint; statuimus et ordinamus ut, non obstantibus præmissis, siquando horum aliquis, peracto anno ætatis suæ quadragesimo, in Permissorum numerum admitti petat, is imprimis testimonia quàm plenissima de doctrinâ et moribus suis proferat Comitiis Minoribus. Hæc percautè scrutentur et expendant Censores, et, si ita sibi visum sit, in Comitiis quibusvis Majoribus posteà habendis, palàm explicent, impetrentque de iis Collegii sententiam. Denique, si major pars Sociorum in illis Comitiis præsentium, suffragiis per pilas occultè acceptis, consenserit, instituantur, quamprimùm commodè fieri poterit, examinationes ordinariæ, uti de Permissis jam antè præceptum est."

I am, Sir, your obedient servant,

FRANCIS HAWKINS.

Edwards Crisp, Esq.
&c. &c. &c.

5.

Gedgrave Hall, Woodbridge, Suffolk;
March 14, 1848.

SIR,—I laboured under the impression (an erroneous one it appears) that all general practitioners of forty years of age, could be admitted to examination at the College of Physicians. I have, on the other side, inserted the number of my Essays, &c., on various subjects. Will you be kind enough to bring the matter before the Censor's Board, and inform me at your earliest convenience whether I can be admitted to examination without attending the medical practice of a British hospital?

I am, Sir, your obedient servant,

EDWARDS CRISP.

Francis Hawkins, M.D.

Cases of Cerebral Disease, with Observations. *March* 7, 1840.*

Essay on Dry Gangrene, endeavouring to show that it arises from Arteritis. *May* 15, 1841.

Perforations of the Stomach (from simple Ulceration), with Statis-

* The dates have been added to this note. The reader must bear in mind that I could not accomplish my object without this exhibition.

tical Deductions. Uterine Derangement supposed to be the Predisposing Cause. *Aug.* 5, 1843.

Essay on Gall-stones, with Statistical Deductions. *Dec.* 11, 1841.

Cases of Melæna, with Observations. *Feb.* 7, 1846.

Infantile Pleuritis, Diagnosis of, with Cases. *Jan.* 16, 1847.

Intestinal Obstructions, recommending Surgical Operations in some Cases. *March* 6, 1847.

Puerperal Convulsions, with Albuminous Urine (1844); and several published cases not alluded to. Numerous morbid specimens exhibited at the London, South London, and Pathological Societies.

Case of Large Polypus of the Uterus occurring during Parturition. *Trans. of the Medical Society of London.* 1846.

I obtained the Silver Medal at the Medical Society of London; and the Jacksonion Prize at the Royal College of Surgeons, on the Structure, Diseases, and Injuries of the Blood-vessels, *Dec.* 1844. *Published March* 1847.

I have also a Pathological Museum of my own formation. After passing the Hall and College (1829) I spent several months at the Parisian Hospitals.

6.

18, Bolton Street, Piccadilly, London;
March 15, 1848.

Dear Sir,—I will not fail to lay the statement which you have sent to me, and which cannot fail to command attention, before the Board of Censors, when they meet in the middle of next month, and when I know the decision of that Board, and of the College concerning it, I will inform you of the result.

I am, dear Sir, yours faithfully,

Francis Hawkins.

Edwards Crisp, Esq.
&c. &c. &c.

7.

18, Bolton Street, Piccadilly, London;
March 24, 1848.

Dear Sir,—On referring to the statement which you have forwarded to me, for the purpose of being laid before the censors of the College of Physicians, it has occurred to me that it may be proper to inquire of you whether it is your desire to obtain the *license* of the College, or the *extra-license*, i. e. for practising as a physician in the country.

If you have any view to practising in London, of course the former should be your object. But if you intend to practise only in the country, the extra-license would be the more proper of the two, and, in this latter case I think you may have permission to be examined without delay, that is, at the next examination, which will commence on the 10th of April. Not that I apprehend any difficulty as to your obtaining permission from the Censors and the College to be examined for a license, if that be your object, because the statement which you have sent appears to be very satisfactory. But it will take some time to ask permission of the Censors and the College, whereas permission to be examined for an extra-license would, I am of opinion, be granted to you at once, by the President and Elects.

I am, dear Sir, yours faithfully,

Francis Hawkins.

Edwards Crisp, Esq.
&c. &c. &c.

8.

Gedgrave Hall, Suffolk;
March 27, 1848.

Dear Sir,—I am sorry that I have given you so much trouble. I am desirous of obtaining the *license* of the College, and not the extra-license. It is my intention to pass some months at the continental schools (Berlin, Vienna, Paris) before I offer myself for examination: but previous to leaving England I am anxious to know whether I can be admitted to examination on my return?

Believe me, dear Sir,
Yours very faithfully,

Edwards Crisp.

Francis Hawkins, M.D.

9.

18, Bolton, Street, London;
April 17, 1848.

Dear Sir,—I have the pleasure to inform you that the Censors of the College of Physicians have recommended, and the College has assented to the recommendation, that you should be admitted to examination for a license.

The next examination will take place about the middle of June.

I am, dear Sir, yours faithfully,

Francis Hawkins.

Edwards Crisp, Esq.

I wrote to Dr. Hawkins, thanking him for his kindness and trouble, but I have not a copy of this note.

I now ascertained that the College of Physicians had not the power to grant me a degree, although I could obtain a license to practise. I therefore determined to go to Scotland, and obtain my degree there by examination, in preference to the purchase of a German diploma (Giessen or Erlangen) from a wine merchant. The University of Edinburgh required twelve months' residence before a degree could be obtained. I passed my examination at St. Andrew's in August, and did not return to London until a fortnight before the examination at the College of Physicians.

Before I left London, I was distinctly told by Mr. Sedgwick, the Secretary to the College of Physicians, that the only examination I should be required to undergo in Latin would be the *vivâ voce* translation of some of the medical authors. The following correspondence will show that I had no reason to suppose otherwise on the day of the examination.

10.

Walworth; May 16, 1848.

Sir,—I put my name down for examination at the College of Physicians for next month, but as I purpose first obtaining a *degree* in Scotland, I shall not be able to present myself for examination until September.

Yours very truly,

Edwards Crisp.

Mr. Sedgwick, College of Physicians.

11.

65, York Place, Edinburgh;
August 4, 1848.

Sir,—Will you oblige me by informing me when the next examination will take place at the College of Physicians?

I am, Sir, your obedient servant,

Edwards Crisp.

Mr. Sedgwick.

12.

Grove Villa, Scarborough;
Aug. 14, 1848.

Sir,—Your note of the 4th instant has been forwarded to me. The following arrangements have been made for the next examination at the College of Physicians, London.

Monday, Sept.	25	Examinations on Paper, commencing at 10 a. m. on each day.
Tuesday, ,,	26	
Wednesday, ,,	27	
Thursday, ,,	28	Vivâ voce examinations in the afternoon.
Friday, ,,	29	
Saturday, ,,	30	Admissions.

Should it be your intention to present yourself, I shall be obliged by your informing me (by letter addressed to the College), as early as possible in September.

I was in Edinburgh last Friday, but had not then received your note, or I would have answered it personally.

I am, Sir, your obedient servant,

J. B. Sedgwick.

Edwards Crisp, M.D.
&c. &c. &c.

13.

College of Physicians;
Sept. 13, 1848.

Sir,—I shall be obliged by your informing me, by return of post, if it be your intention to present yourself for the examination which commences on the 25th instant.

I am, Sir, your obedient servant,

J. B. Sedgwick.

Edwards Crisp, M.D.
&c. &c. &c.

14.

Imperial Hotel, Dublin;
Sept. 1848.

Sir,—Your letter, directed Edinburgh, was forwarded to me from Glasgow to this place. As I am desirous of seeing the practice at the Dublin hospitals, I shall not present myself for examination at the College of Physicians until December.

Your obedient servant,

Edwards Crisp.

Mr. Sedgwick.

15.*

82, Leeson Street, Stephen's Green, Dublin;
Nov. 14.

Sir,—Will you oblige by informing me, the day on which the College examination will commence?

Your obedient servant,

Edwards Crisp.

16.

College of Physicians;
Nov. 15, 1848.

Sir,—The next examination will commence on the 14th or 15th of December, but the exact day has not yet been fixed. Please to send me your address when you come to town.

I am, Sir, your obedient servant,

J. B. Sedgwick.

Edwards Crisp, Esq.
&c. &c. &c.

17.

College of Physicians;
Dec. 4, 1848.

Sir,—The Censors request that you will attend at the College on the 15th, 16th, and 18th instant, at 10 a. m. on each day, in order to answer questions upon paper.

In compliance with the regulations of the College, it will be requisite for you to attend the meetings of the Comitia Minora on the 20th and 21st instant, and to bring with you your certificates.

I am, Sir, your obedient servant,

J. B. Sedgwick.

An *early* answer is requested.

E. Crisp, M.D.

* I have not preserved the copies of notes Nos. 11, 14, 15.

FIRST EXAMINATION.

IN PARTE PHYSIOLOGICA.

December 15th, 1848.

1. State what are the causes which either retard or accelerate the coagulation of the blood, and what are most probably the causes of the formation of the buffy coat in inflammatory blood.

2. By what vessels is the liver supplied with blood? What is the course and mode of termination of each of them, and what conclusions may be drawn from their ultimate distribution as to the functions which each performs?

3. What are the phenomena which have been observed in muscles during contraction, and what is the effect of exercise on muscular structure?

4. Describe the structure of the substance of the lungs.

5. In what manner do the sympathetic and spinal system of nerves communicate, and what purpose may we suppose that the ganglionic nerve fibre serves in the animal economy?

6. To what organs does the pneumogastric nerve supply branches? with what nerves is it connected, and what are the effects which result from dividing this nerve?

TRANSLATE INTO LATIN.

Ἢν δὲ ἐς τελευτὴν ἥκῃ τὸ κακὸν, ἀτὰρ ἰδροῖ ὤνθρωπος· χολὴ μέλαινα ἄνω καὶ κάτω· οὖρα σχεθέντα κύστει ὑπὸ σπασμοῦ· ἀλλ' οὐδὲ οὖρον ἀλίζεται ὑπὸ τῆς ἐς τὸ ἔντερον τῶν ὑγρῶν μετοχετεύσεως· ἀφωνίη· σφυγμοὶ σμικρότατοι καὶ πυκνότατοι, ὁκόσοι ἐπὶ Ξυγκοπῇ· ἐντάσιες ἐμέτου ξυεχέες, κενεαί· προθυμίαι τεινεσμώδεες, ξηραὶ, ἄχυλοι. Θάνατος ἐπώδυνος καὶ οἴκτιστος, σπασμῳ, καὶ πνιγὶ, καὶ ἐμέτῳ κένῳ.—ARETÆI *de Cholera*, Cap. v.

TRANSLATE INTO ENGLISH.

Scire autem licet, integrum corpus esse, cum quotidie mane urina alba, dein rufa est: illud concoquere, hoc concoxisse significat. Ubi experrectus est aliquis, paulum intermittere: deinde, nisi hiems est, fovere os multa aqua frigida debet. Longis diebus meridiari potius ante cibum; sin minus, post eum: per hiemem potissimum totis noctibus conquiescere. Sin lucubrandum est, non post cibum id facere, sed post concoctionem. Quem interdiu vel domestica, vel civilia officia tenuerunt, huic tempus aliquod servandum curationi corporis sui est. Prima autem ejus curatio, exercitatio est, quæ semper antecedere cibum debet: in eo, qui minus laboravit, et bene concoxit, amplior; in eo, qui fatigatus est, et minus concoxit, remissior. Commode vero exercent, clara lectio, arma, pila, cursus, ambulatio; atque hæc non utique plana, commodior est; siquidem melius ascensus quoque et descensus, cum quadam varietate corpus moveat, nisi tamen id perquam imbecillum est. Melior autem est sub divo, quam in porticu; melior, si caput patitur, in sole, quam in umbra; melior in umbra, quam parietes aut viridia efficiunt, quam quæ tecto subest; melior recta, quam flexuosa. Exercitationis autem plerumque finis esse debet sudor, aut certe lassitudo, quæ citra fatigationem sit: idque ipsum, modo minus, modo magis faciendum est.—CELSI *Medicinæ*, Lib. I.

But it is necessary to know when the body is healthy, that daily the urine in the morning is white, then red (of a brick-dust colour): the one signifies that digestion is going on, the other that it is finished. After rising, it is better to rest a little; then, unless it is winter, he ought to rince the mouth with much cold water. To sleep rather in the long days, before taking food, but less after it. But study is to be had recourse to, not after food, but after digestion. For those who hold civil or domestic offices, some time should be set apart for the health of the body. But the first care is exercise, which always ought to be taken before food; more by him who has laboured little and well digested; more moderately by him who is fatigued and has digested less. Loud reading, the use of arms, the ball, running, walking, may be advantageously used, and it is better that these should not be had recourse to on level ground; truly better ascent and descent, which produce a greater variety in the movements of the body, unless it be too weak.

But it is better in the open air than under cover; better if the head is exposed; better in the sun than in the shade; better in the shade which walls and trees produce, than under a roof; better in the erect position, than in the bent. But commonly sweat ought to be the end of exercise; or certainly lassitude, beyond fatigue; and it is to be produced sometimes more, sometimes less.

Question 1.

(I had inquired of Dr. Nairne, who was present, whether this question had reference to the blood in or out of the body? He said, "out of the body.")

The chief causes which retard the circulation of the blood are—motion, heat, certain salts; the form and nature of the contained vessel, &c.

The condition of the blood itself is also to be taken into account. Thus, in certain states of the body (cacoæmia) scurvy, chlorosis, and some fevers; the coagulation of the blood would probably be retarded.

The cause of the formation of the buffy coat of inflammatory blood, is, I believe, the increase of the fibrinous particles, and the greater tendency of these particles to approach each other. The slow coagulation of the blood has been assigned as a cause by some, but I think there is much doubt about this matter.

Question 2.

The liver is supplied with blood by the hepatic artery and the vena portæ. The former a branch from the cæliac axis of the aorta; it passes to the fissure of the liver, and divides into two branches; one supplying each lobe. The vena portæ is formed by the superior and inferior mesenteric, the splenic, gastric, pancreatic, and duodenal veins. The two branches (the splenic and mesenteric) unite and form the portal vein, which passes through Glisson's capsule; between the hepatic artery and duct, to the liver, and, like the artery, divides into two branches.

The structure of the liver is composed of minute lobules. (I drew with my pen their shape, with the distribution of the vessels.) The lobules are surrounded by a capsular covering from Glisson's capsule. The artery, portal vein, and duct, ramify, chiefly on the outside of these lobules, and the hepatic vein is seen in the centre of the lobule; the branches of this vein, contrary to those of the vena portæ, gradually increase in size, and terminate in the inferior cava.

The hepatic vein also differs from the portal vein in this respect; when the latter is cut through it remains open, in consequence of the covering it receives from Glisson's capsule. The hepatic vein, on the other hand, collapses.

The vena portæ is probably the chief instrument in the secretion of the bile, but there are cases on record where this vein has been obstructed, or absent; (has not taken its proper course through the liver.) These cases tend to show, that the artery, at least, has a compensatory power.

But I think we have yet much to learn about the anatomy* and physiology of the liver, and many unsettled questions might be adduced.

Thus does the bile pass into the duct by the rupture of the bile-globule, or by transudation?

(This, the last paper, and the time 4 o'clock.)

Question 3.

The effect of muscular contraction is, first, the fixation of the ends of the muscle (voluntary), then the fibres act singly, and have a wave-like motion. A muscle has no power to elongate itself. There is an

* I confess I do not understand it, and I doubt whether anybody does. This and all the other notes have been added since the examination.

increase of heat (about one degree), and, according to Dr. Wollaston, sound is produced.

The action of involuntary (unstriped) muscles of the alimentary canal, is probably compound, as they are composed of two orders of fibres, longitudinal and circular.

The effect of exercise upon muscular structure is, increase of size (hypertrophy), and after long exertion the muscles are powerless; probably, in consequence of nervous exhaustion.

Question 4.

The structure of the lungs is made up of blood-vessels, bronchial tubes; air-cells, nerves, and lymphatics; united by cellular tissue.

The bronchial arteries are the nutrient arteries of the lung. The pulmonary artery is distributed to the lining membrane of the bronchial tubes, and chiefly upon the air-cells, and it is in the capillary vessels of these cells that aeration chiefly takes place.

The bronchial tubes are muscular (Riesseissen's muscles), although some suppose them to be elastic only. These tubes gradually diminish in size, and the terminal branches are said to divide into 18,000 air-cells, which have no direct communication with each other. The mucous lining of the tubes is supplied with an epithelial covering, which is furnished with ciliæ. These act only in one direction, viz. towards the trachea, and assist in expectoration. The air-cells have probably no epithelial lining, or ciliæ.

Question 5.

The sympathetic and spinal system of nerves communicate by means of branches, which are sent from the ganglia of the former. These ganglia are seated along the course of the spine, from the head to the coccyx. The cervical ganglia send one branch to the spinal nerves; the dorsal, lumbar, and pelvic, two branches.

In the head there are six ganglia: Ribes', the ciliary, Cloquet's, spheno-palatine, otic, and sub-maxillary. These ganglia are indirectly connected with the spinal nerves.

The ganglia, as well as the gray matter of the brain and spinal cord, when seen under the microscope, present a vesicular appearance. (I made a sketch with my pen.) The white matter of the brain and spinal cord is tubular.

The gray matter is supposed to be the seat of power, and Mr. Grainger believes that he has traced both roots of the spinal nerves into the gray matter of the cord.

The gray matter of the corpus striatum, which body is supposed to be the seat of motive power, can be traced into that of the corpus pyramidale, and the gray matter of the thalamus, a body in which the sensitive power is supposed to reside, can be followed into the corpus olivare.

The white matter serves as a means of communication between the spinal and cerebral ganglia.

The sympathetic chiefly supplies the organs of animal life; thus the organs of the chest and abdomen receive their nervous supply, in a great measure, from this source. The heart and kidney are abundantly supplied with its branches.

Question 6.

The pneumogastric nerve supplies branches to the larynx, pharnyx, œsophagus, lungs, and stomach.

It is connected with the spinal accessory, lingual, glosso-pharyngeal, sympathetic and spinal nerves, and indirectly with the cerebral ganglia. It forms, with the sympathetic, the pharyngeal, œsophageal, cardiac, pulmonary, and solar plexuses. A branch of the phrenic is described as going to the solar plexus, but Cruveilhier denies this.

I do not recollect the exact effect produced by the division of these nerves, although I have read the experiments of Magendie and Sir Astley Cooper; but, looking to their function, one would expect irrregular action about the muscles of the larynx, and impairment of the functions of respiration and digestion. I believe, however, that the division of these nerves does not generally produce sudden death, and that the animal may live some time after the lesion, the time varying in different cases.

SECOND EXAMINATION.

IN PARTE PATHOLOGICA.

December 16th, 1848.

1. The causes and symptoms of peritonitis.
2. The signs and symptoms of pneumonia.
3. Specify the leading characters of the lithic-acid diathesis.
4. What are the symptoms of scurvy?
5. Specify the distinguishing features of lepra and of herpes.
6. Distinguish paralysis of the facial nerve from paralysis of the third pair of nerves.

TRANSLATE INTO LATIN.

I. Αἱ μεταβολαὶ τῶν ὡρέων, μάλιστα τίκτουσι νοσήματα· καὶ ἐν τῇσιν ὥρησιν αἱ μεγαλαι μεταλλαγαὶ ἢ ψύξιος ἢ θάλψιος καὶ τὰ ἄλλα κατὰ λόγον οὕτως.—Hippocratis *Aphorismi*, Sectio Tertia.

TRANSLATE INTO ENGLISH.

Febris hæc, quæ per annum perseverarat omnem, initio Julii, 1675, longe lateque depopulata est; sed autumno jam appropinquante in viscera cœpit converti, nunc dysenteriæ symptomatis, nunc diarrhœæ se prodens, licet quandoque neque hanc haberet comitem, neque illam, sed caput magis tentabat, stupidiores reddens ægros. Variolæ interea, quæ jam pauculos hinc inde affecerant, sub æquinoctium au-

tumnale penitus disparebant, vix unum alterumve jugulantes. Jam enim Febris alios vincens epidemicos anni præ-dominio potiebatur. Observandum est nihilominus, quod, cum proclivior esset Febris hæc materiam morbificam in viscera deponere, quæ dysenteriam quandoque, sæpius autem diarrhœam, excitabat, ex hac occasione ventris tormina eam edidisse stragem vulgo putabantur, quæ Febri huic revera fuerat imputanda; licet nemo, qui ægrotos hoc autumno tractaverit, nescius sit quantum invaluerit hæc Febris; ut nec etiam, dysenteriam dictam et diarrhœam pro symptomatis, magis quam morbis essentialibus ac primariis, haberi debuisse.—SYDENHAM, *Observationem Medicarum*, Sectio V, Cap. 1.

TRANSLATION AND ANSWERS.

This fever, which had continued all the year from the beginning of July, 1675, depopulated the country far and wide; but the autumn approaching, it began to be turned towards the intestines; sometimes producing symptoms of dysentery, sometimes diarrhœa; sometimes having neither one nor the other complication, but affecting the head; rendering the sick comatose. In the mean time, smallpox, which had affected but few persons from this time, almost disappeared towards the autumnal equinox, scarcely destroying any; for the fever overcoming other epidemics of the year, now obtained its height. It was, nevertheless, observed concerning this fever, that there was a greater disposition to deposit a morbific matter in the intestines, which sometimes excited dysentery, but oftener diarrhœa; on this account, the tormina of the bowels were commonly thought to have produced death, which had been imputed truly to this fever. Although no one who had treated the sick this autumn, could be ignorant how much this fever had weakened; and also that the aforesaid dysentery and diarrhœa ought to be accounted as symptoms, rather than as essential and necessary parts of the disease.

QUESTION 1.

The causes of peritonitis are various. In the idiopathic form, which is comparatively of rare occurrence, the causes which commonly produce idiopathic inflammation, such as exposure to cold, wet, &c., may be enumerated.

Numerous causes of a local nature give rise to this inflammation, as herniæ, adventitious bands, perforations from ulceration of various

parts of the alimentary canal, intus-susception, impacted scybala, extraneous bodies in the appendix vermiformis, poisons, &c. Blows, wounds, and external injuries of all kinds may also be enumerated.

The symptoms will depend, in a great measure, upon the cause. Thus, if inflammation be of a local character, the pain at first will be more circumscribed; if it be idiopathic, more diffused.

There is generally pain, heat, and tenderness of the abdomen, increased on pressure; fever, small, quick pulse; constipation, the thighs are flexed upon the pelvis, sickness is sometimes present, tympanitis, anxious countenance, &c.

These symptoms will vary much in different cases according to the cause and seat of the disease. All who have seen much of this disease are aware that many of the symptoms described in books are frequently absent. The disease may be of a very insidious character. Abercrombie and Andral have published several examples, in which this disease has gone on to a fatal termination, and the symptoms have scarcely warranted the belief that inflammation existed.

Another form of this disease, in which the symptoms are somewhat peculiar, should not be forgotten, as it is one which, in a diagnostic point of view, is very important, viz. the inflammation which arises from perforation of the stomach or intestines.

This cause of inflammation is more likely to occur in young females from SIMPLE ulceration of the stomach; the subjects generally are unmarried, young, and the uterine functions are deranged. I speak from a large amount of facts.*

* The reader may think this rather too egotistical, but I believe it to be a matter of great "*practical*" importance, and I have reason to think that many young females die from peritonitis, occasioned by these perforations, who are supposed to labour under idiopathic inflammation only. My pamphlet on this subject was published in August 1843, and my views respecting the causes, &c., of this lesion, were stated at the London Medical Society, (Lancet, Dec. 1837). As a proof that this disease has not received sufficient attention from modern writers, I may request the reader to turn to page 139 of Dr. Alderson's work on 'Diseases of the Stomach and Alimentary Canal,' published in 1847, a work I did not see until after the examination. In making this request I mean nothing in the slightest degree offensive towards Dr. Alderson, who throughout the examination appeared to show a kind and gentlemanly feeling, although I am entirely ignorant of his opinion respecting my demerits, as I am of the opinion of the rest of the Examiners. My only excuse for this allusion is the peculiar position in which I am placed. I was *told* I was rejected because I was deficient in practical knowledge.

There is sudden and violent pain over the abdomen, the countenance is greatly altered, so that the disease once seen can scarcely fail to be recognised. The abdominal muscles are often spasmodically affected, and some patients have complained that when medicine, such as pep-permint, has been swallowed, that it has passed over the abdomen; tympanitis and the usual symptoms of peritonitis follow, and death generally takes place in a period varying from twelve to forty hours.

Ulceration of the intestine generally occurs after fever; the symptoms are less sudden and severe; death takes place at a later period, especially if large doses of opium are given, as recommended by Dr. Stokes, of Dublin.

Another form of peritonitis may occur in certain blood-diseases, as in fever, especially the puerperal.

The disease may exist in a chronic form, and the tubercular which occurs more frequently in young scrofulous subjects, and which has been so well described by Dr. Marshall Hall, should not be forgotten.

Question 2.

The symptoms of pneumonia, like those of peritonitis, will vary much in different cases, the variations depending upon the diseases with which it is complicated, and upon the seat of the inflammation.

There is generally pain in the chest, more frequently in the right side, the right lung being more generally affected, and the inflammation, in the majority of cases, is confined to the lower two thirds of the lung. There is cough, increased pain on inspiration, expectoration of a viscid, tenacious, gluey matter, often rusty coloured, from the presence of blood-globules; the patient lies on his back, and the face and lips are often of a dark colour, in consequence of the blood not being sufficiently oxidized.

But many of these symptoms may be absent:* thus this inflammation may exist without the presence of pain, cough, or expectoration. The respiratory movements will be more or less affected in different cases. If the disease be complicated with inflammation of the diaphragmatic pleura, the respiration will be more embarrassed, and the distress greater than if other parts be affected.

* See an account of thirteen cases of pneumonia, by Dr. Hughes, Med. Gazette, November 3d and 10th, 1848.

The signs afforded by percussion and auscultation will vary according to the stage of the disease. In the first stage, in which the lung is congested, and gorged with blood, there is slight dullness on percussion. The fine crepitating râle is heard, and this râle may be absent for a time, and then, as the lung recovers itself, it may be again present.

Dr. Stokes says, in the earliest stage, before the lung is much congested, the respiration is puerile. I believe this opinion to be correct.

In the second stage, where there is consolidation from deposit of lymph, there is dullness on percussion; the respiratory murmur is absent, and broncophony will be heard.

In the third stage, that of purulent infiltration, the mucous and large, moist, muco-crepitating râles will be generally present.

Various complications may exist with pneumonia, such as pericarditis, where the "to and fro" sound will be heard; pleuritis, where the friction-sound will be present; fluid in the pleuræ, which, if a small quantity only is present, will sometimes give rise to œgophony. If combined with tubercle, pneumothorax may occur. In short, the sounds above described, with pectoriloquy, metallic tinkling, &c., may be present. The varieties depending upon the nature of the lesions.

QUESTION 3.

Persons of this diathesis are generally those who eat and drink much, and labour little. Aldermen, gentlemen farmers, &c.

The urine is acid, clear, and presents the appearance of high-coloured sherry. There is a deposit of red gravel, or what is called red sand. The characters of this deposit are generally so distinct, that the use of the microscope is not required.

The lithic-acid calculi are of a reddish colour, mostly oval in shape, and they consist of concentric laminæ. This deposit forms the most frequent nucleus of the other deposits, but I believe it is never deposited upon the phosphates.

Lithic acid may also be superabundant in other diseases, such as gout and rheumatism. Dr. Williams* states that, in a patient of his, who had rheumatic inflammation of the knee-joint, Dr. Garrod detected this acid in the perspiration, and Dr. Williams also states, that in a case of gout, Mr. Palmer found lithic acid (free) in the blood.

* Principles of Medicine, 1847.

Question 4.

When we take into account the condition of the blood in this disease, the symptoms admit of a very ready explanation.

It occurs generally amongst a class of patients who are badly fed; salt provisions, and the absence of a proper vegetable diet, being the chief causes,—Dr. Garrod believes, from the use of a diet in which the salts of potash are absent or deficient, and he has found these salts in the blood and muscles of scorbutic patients to be diminished in quantity.

The disease consists of great general debility: the face is pale; there is a spongy state of the gums, with a great disposition to the escape of blood from its proper vessels. Thus extravasations of blood under the skin, and discharges of blood from the mucous and musculo-mucous cavities are very common. The cicatrices of old wounds are said to open, and fractured bones to disunite in some cases.

There is another kind of scurvy, several cases of which I have lately seen in Scotland and Ireland, which is called land scurvy, but this form of the disease more resembles purpura.

The blood is generally supposed to be deficient in fibrine; it is watery, and less coagulable, although in three cases which were under the care of Mr. Busk,* on board the Dreadnought, the blood was found not to be materially altered in character, and not deficient in fibrine. Numerous and well-conducted experiments, however, are necessary, before this inference can be substantiated.

Question 5.

Lepra is a scaly disease, which occurs in various parts of the body, especially on the extremities. It consists of roundish, scaly patches, which may be distinguished from those of psoriasis by their more regular form. It seldom gives rise to much constitutional disturbance, but when the eruption suddenly recedes (and this will apply to most eruptive diseases), the constitutional symptoms are more manifest. I have seen several examples of this.

Herpes is a vesicular disease, and one form of it, which is vulgarly called the shingles, more frequently appears on the trunk; generally it is confined to one side, and the appearance of the eruption is mostly

* Simon's Chemistry, vol. i, p. 315. Sydenham Society.

preceded by internal pain, which disappears when the vesicles show themselves. The vesicles are clustered together in small patches, which sometimes subside, and a fresh crop appears in the neighbourhood. There is seldom much constitutional disturbance.

This eruption may appear in other parts, and may assume different forms. Thus, we have herpes circinnatus, herpes labialis, preputialis, &c. I can scarcely suppose that this eruption could be confounded with that of lepra.*

QUESTION 6.

In paralysis of the portio dura there is a lax condition of the muscles of the cheek and lips of the affected side, a dropping of the angle of the mouth, and an inability to close the eyelid. The act of mastication is also interfered with, in consequence of the affection of the buccinator; so that the food often gets between the teeth and the cheek, and the patient is obliged to remove it with his finger.

In paralysis of the third nerve there is dropping of the upper eyelid (ptosis) and the muscles supplied by this nerve; the upper, inferior, and inner recti and the inferior oblique are paralysed. I forget the state of the pupil, which is probably affected, as this nerve sends a branch to the ciliary ganglion. The pupil is most likely dilated.

THIRD EXAMINATION.

IN PARTE THERAPEUTICA.

DECEMBER 18th, 1848.

1. WHAT process would you prescribe to purify air in rooms when it has been rendered impure by diseased occupants, or other causes? Explain the nature of the chemical change on the vitiated air by the process of purification.

* In answering this question, I thought (erroneously) that a distinction was to be made between the two diseases.

2. What plan of treatment would you adopt in diabetes mellitus?

3. What is meant by catalysis, and by isomorphism, as used in chemistry? Give an example of each.

4. Give the elementary composition of cod-liver oil, of naphtha, and of chloroform. In what does chloroform differ from chloric ether, and from formic acid?

5. What proportion of hydrocyanic acid is contained in 100 grains of the dilute hydrocyanic acid of the Pharmacopœia?

6. What is the appropriate treatment of patients suffering from oxalate of lime deposit in the urine? Is a residence in rural districts supposed to increase the deposit, or to tend to remedy the evil?

7. How would you detect arsenious acid in a mixed fluid?

TRANSLATE INTO LATIN.

V. Κόποι αὐτόματοι φράζουσι νούσους.

VI. Ὁκόσοι πονέοντές τι τοῦ σώματος, τὰ πολλὰ τῶν πόνων οὐκ αἰσθάνονται, τουτέοισιν ἡ γνώμη νόσει. — HIPPOCRATIS *Aphorismi*, Sectio Tertia.

TRANSLATE INTO ENGLISH.

Est etiam observatio necessaria, qua quis in pestilentia utatur adhuc integer, cum tamen securus esse non possit. Tum igitur oportet peregrinari, navigare: ubi id non licet, gestari, ambulare sub divo, ante æstum, leniter; eodemque modo ungi: et ut supra comprehensum est vitare fatigationem, cruditatem, frigus, calorem, libidinem: multoque magis se continere, si qua gravitas in corpore est. Tum neque mane surgendum, neque pedibus nudis ambulandum est, minimeque post cibum, aut balneum: neque jejuno,

neque cœnato vomendum est: neque movenda alvus: atque etiam, si per se mota est, comprimenda est: abstinendum potius, si plenius corpus est. Itemque vitandum balneum, sudor, meridianus somnus, utique si cibus quoque antecessit; qui tamen semel die tum commodius assumitur; insuper etiam modicus, ne cruditatem moveat. Alternis diebus invicem, modo aqua, modo vinum bibendum est. Quibus servatis, ex reliqua victus consuetudine quam minimum mutari debet. Cum vero hæc in omni pestilentia facienda sint, tum in ea maxime, quam Austri excitârint. Atque etiam perigrinantibus eadem necessaria sunt, ubi gravi tempore anni discesserunt ex suis sedibus, vel ubi in graves regiones venerunt. Ac si cetera tres aliqua prohibebit, utique abstinere debebit: atque ita a vino ad aquam, ab hac ad vinum, eo, qui supra positus est, modo, transitus ei esse.—Celsi *Medicinæ*, Lib. I.

TRANSLATION AND ANSWERS.

There is also another necessary observation in a pestilence to be used by one yet healthy, but nevertheless he cannot be safe. Then, therefore, it is proper for him to travel; when this cannot be done, to be carried, or to walk slowly in the open air, before the heat of the day; and at the same time to anoint, and, as is comprehended above, to avoid fatigue, crudity, cold, heat, venery, and to be more particular if there is any indisposition of body. Neither is he to rise early in the morning, nor to walk with naked feet, and less after food and the bath; nor is he to be vomited upon an empty stomach, nor the bowels to be moved, and also if too much moved they are to be restrained; abstinence to be observed rather if the body is full. And also to avoid the bath, sweating, sleep at noon, and certainly if food has been taken; which, nevertheless, is taken more advantageously once daily, and also in moderation, lest it should lead to crudity. On alternate days, by turns, sometimes water, sometimes wine is to be drank. *Which things being observed according to the usual custom of the food, which ought to be changed as little as possible.** But as these things are to be done in every pestilence, likewise in that especially which the south winds produce; and also the same is necessary to those travelling, when they

* This piece was quickly written and never once read over; indeed I had not time, for my papers were never finished until after 4 o'clock.

have left their houses at sickly seasons of the year, and when they come into unhealthy regions. And if one thing shall prohibit the observance of the rest, he ought certainly to abstain, and so he may pass from wine to water, and from this to wine, in that manner which is indicated above.

Question 1.

The best method of purifying air in a room is to admit pure air through the doors, windows, or other passages.

Various disinfecting agents have been used to purify the air, such as the chlorides of lime, and soda, nitrate of potash, &c.; but the admission of fresh air, when it can be done with safety to the inmates, is to be preferred.

The chief causes of impurity of the air in crowded apartments are the decrease of oxygen, the increase of carbonic-acid gas, and the presence of sulphuretted hydrogen.

The use of lime in some instances might probably be had recourse to, when an excess of carbonic-acid gas is present, but it must be recollected that in heated rooms the carbonic-acid gas ascends, and is pretty equally diffused.

We know so little of the nature of animal and vegetable miasms, that nothing positive can be said about them.

The change effected by the introduction of pure air arises chiefly from the supply of oxygen which is deficient.

Probably one good method of affording a supply of fresh air to crowded rooms and to the decks of a ship, would be to pump fresh air in from above, and allow the impure air to escape by means of openings at the top.

Question 2.

I have seen various plans of treatment tried in this disease, and numerous medicines have been recommended by different writers, but probably their virtues have been greatly overrated: indeed, I cannot call to mind one medicine that I have known of essential service.

Bleeding, tonics, the preparations of iron, purgatives, lime water, rhatany root, &c., have found their advocates among different practitioners.

The most important indications of treatment in this disease consist in attention to the functions of the skin, and also great attention to the diet. The skin is harsh and dry, and the use of the warm or tepid bath, with dry rubbing afterwards, will be advisable.

I would recommend a diet consisting chiefly of animal food, with a small quantity of sherry during the day. It is difficult, however, to carry out this mode of treatment, as the patients often have voracious appetites, and a great desire for farinaceous food.

The benefit of this plan of treatment, however, is well shown in two cases which were treated by Dr. Todd,* at the King's College Hospital. The men were locked in the ward, and allowed only a diet consisting almost exclusively of animal food, with a small quantity of sherry or brandy-and-water for drink. They never left the ward without being accompanied by a keeper.

The specific gravity of the urine was reduced, I think, from 1050 to 1015 or 1020, and the quantity of sugar greatly diminished. I am not, however, acquainted with the ultimate effect of this treatment upon the patients.

In this disease, as there is generally a great amount of acid present in the stomach, the use of light vegetable tonics, combined with alkalies, may be serviceable. Climate and attention to temperature are also important. I believe most of these patients die of chest affections; especially of tubercular deposit in the lungs. I met with a case lately, where a patient who laboured under diabetes mellitus died of pleuritis, from exposure to cold. I mention this to show the extreme importance of attention to the temperature of the skin.

(I think I said, we have yet to learn much about the effect of change of climate upon this disease; and I think I slightly alluded to diabetes insipidus; but as this paper probably is not destroyed, a comparison can be made, I presume, by any Fellow of the College.)

Question 3.

By catalysis is meant—A body which produces a change in another without itself being affected.

Examples. Yeast, blood-poisons, vaccine.

* Medical Gazette, 1848.

Isomorphism, is the tendency of bodies (crystals) to assume a like form.

Examples. Probably, meconate of morphia,* and gallate of veratria.

Question 4.

Cod-liver oil, C. H. O. Naphtha, C. H., a carburet of hydrogen. Chloroform, Crine. H. C.

Chloroform is prepared with ten parts of chloride of lime, two parts of alcohol (a hydrated oxide of ethule), and sixty parts of water. These are boiled and the chloroform distils over. It is purified afterwards with chloride of sodium and carbonate of potash.

Chloric ether probably is composed of chloric acid and ethule.

Formic acid (the acid of ants) probably a compound of oxygen and formyle; but I know but little about these bodies.†

Question 5.

In hujus acidi hydrocyanici diluti (gr. 100), acidi hydrocyanici (gr. 2), continentur.

(After writing as above, I had doubled up my paper, and thought it would be better to put the figures in Latin. I put *centum grana*, and *grana duo* over the figures without reading the Latin afterwards. I explained to the Examiners at the first verbal examination how this mistake happened. Dr. Alderson had told me, in the morning, that one question must be answered in Latin. I replied that I did not suppose that I should be required to answer questions in Latin, and that I did not think that I was obliged to give even a written translation of

* The reader will smile at these examples. I confess I could not be positive about any two bodies that were isomorphous, and knowing that the elements of these bodies were the same, I quoted them, believing, I also confess, that the Examiners probably would not know whether I was right or wrong. I need not remind the reader that this doctrine of isomorphism is built upon a sandy foundation. Thus "the angles of crystals reputed isomorphous are not always exactly equal. The same body may assume, in different circumstances, two forms which are totally dissimilar, and have no relation to each other. Carbon in the diamond occurs in regular octohedrons; in plumbago, in six-sided plates, and numerous examples of a like kind might be quoted."—See Grayham's Chemistry, p. 139. I mention this to show that the question could be of no great practical importance.

† The reader perhaps will perceive that the Examiners were not much more enlightened, for they ask for the elementary composition of a *body that does not exist.* Chloric ether is a chloride of hydrocarbon, and I apprehend it would be as correct to ask the elementary composition of hydriodate of potash, as of chloric ether.

the Latin. I must remind the reader that young men fresh from the schools are excused the Greek.)

Question 6.

The treatment of patients suffering from oxalate-of-lime deposit in the urine will consist chiefly in great attention to the functions of the skin, warm clothing, &c. Warm and tepid bathing, and the cold bath in the summer, the patient keeping a short time only in the water, and the use of friction with horse-hair gloves, or rough towels afterwards, may be serviceable.

The mental treatment in this affection is also very important; the patients are often melancholic and depressed, and deficient in stamina. Drs. Rigby* and Sutherland found that one fourth of the patients at St. Luke's Hospital, who were affected with melancholia, had this deposit in the urine. Students who are preparing for their examinations, and whose minds are anxious, are often affected with this deposit.

The medicinal treatment should consist in the administration of the mineral acids; the nitric and hydrochloric acid, or a combination of the two, as recommended by Dr. Golding Bird, is probably the best. Thus, two or three drops of the nitric and hydrochloric acids, combined with some mild vegetable tonic, may be given three times daily, and these may be sometimes advantageously changed for the preparations of iron. If acid should be in excess in the stomach, alkalies may be administered.

Change of air and scene, and a residence in rural districts will be beneficial in this as in most other similar diseases, by strengthening the body and increasing the general stamina.

Probably residence at the sea-side or a sea voyage would be serviceable; and this belief is strengthened by the fact, that sailors are seldom affected with calculus in the bladder.

Green vegetables should probably be avoided, especially those containing oxalic acid, such as rhubarb, &c.; after the eating of which oxalic acid has been found in the stomach. I do not know, however, whether it has been again detected in the urine. We have much to learn respecting the influence of diet upon this and the other urinary deposits.

* Medical Gazette, 1845.

QUESTION 7.

I would first boil some of the fluid in distilled water (taking care that neither the water nor the vessel contained arsenic), then, after adding a few drops of hydrochloric acid, introduce a piece of copper wire, and the arsenic (if present) would be deposited in a metallic form upon the copper.

I would also use Marsh's test, which consists of zinc, sulphuric acid, and water. The suspected fluid is added to this. The water is decomposed, its oxygen oxidizes the zinc, with which the sulphuric acid unites to form sulphate of zinc, and the hydrogen escapes with the arsenious acid, in the form of arseniuretted hydrogen, which burns with a pale blue flame, when a lighted taper is applied.

The ammoniaco-nitrate of silver, ammoniaco-sulphate of copper, hydrosulphuric acid, lime, &c., may also be tried.

But the reduction test is the most conclusive. This consists in adding some of the deposit to charcoal and carbonate of soda, in a glass tube; heat is applied, and the arsenic is sublimed, and appears upon the upper part of the tube. It has a grayish colour, and is of a dull metallic lustre.

I am anxious to address a few words to the reader before he proceeds to the verbal examination.

I confess, believing the examination to be a practical one, that I looked to the result with great confidence, and thought that I could not be *fairly* rejected. I had not been ground or prepared in any way for this or any of my previous examinations, and I was totally unacquainted with what, in the language of the schools, are called "examination dodges." My knowledge was acquired at the bedside, and by the use of the scalpel. I may also remind the reader that I used often the words, probably, it is said, &c., and I spoke doubtfully upon many subjects. I did this because I believed that the present state of our knowledge would not warrant positive conclusions. *I especially direct the attention of the reader to Dr. Todd's questions in the Pathological Examination.*

A word now respecting the Latin examination. Dec. 20th I was requested to read three lines of Celsus in the third written examination, including "Quibus servatis, ex reliqua victus consuetudine quam minimum mutari debet." These words only I was told to construe,

and I did so quickly as in the written paper. Dr. Paris. What do you gather from this?—*A.* That a person during a pestilence should keep to his accustomed diet.—Dr. Paris. Yes, sir, Celsus has very properly observed that during an epidemic the diet should be changed as little as possible.

On the following day, Dec. 21st, the President told me to read and to translate the following: "Ut alimenta sanis corporibus agricultura, sic sanitatem ægris medicina, promittit. Hæc quidem nusquam non est; siquidem etiam imperitissimæ gentes herbas, aliaque prompta in auxilium vulnerum morborumque, noverunt." This I did readily, with the exception of "Hæc quidem nusquam, not est."* I believe I had not seen this passage for many years, and the reader can easily understand how a cramped piece of Latin of this kind might prove (under circumstances) a temporary stumbling-block.

VERBAL EXAMINATION IN ANATOMY.

Wednesday, Dec. 20, 1848.

Dr. Paris commenced by asking me "where I had been reared and educated, and whether I intended to practise as a physician in London?" I replied, in London, or some large town. He then asked me a question in Latin about the structure of the heart. I said, Sir, I am not prepared for this: if I had known it, I would have prepared for this part of the examination.—Dr. Paris. "Oh, the College, although it dispenses with the Greek, considers that a proper knowledge of the Latin language is necessary. Well, then, I will put the question in English. Pray, sir, how many cavities are there in the heart?" I need not tell the reader. "What are they called?" Another question was asked in relation to some part of the heart, and Dr. Paris said, "Well, then, describe the heart." I did so, giving the size, shape, and situation of its cavities, valves, and openings; the safety-valve function first described by the late Mr. King; and I was going on with the three orders of spiral fibres, when I was stopped by Dr. Paris, who asked me to trace the blood from the right auricle through the body,

* This passage is variously rendered. Dr. Venables: This indeed is not nowhere (it is everywhere to be met with). Dr. Collier: There is not a spot on the habitable globe where this science has not some footing. Dr. Greive: There is no spot in the world where this art is not found. Mr. Lee: Indeed, no part of the world is without this art.

and afterwards to describe the change that takes place in the lungs. I must not omit to mention a circumstance which occurred during this part of the examination, and which affords another proof of the President's great veneration for the Latin language. I had forgotten the names of the carneæ columnæ, although I described them as fleshy protuberances, from which cords proceeded, and these terminated in the curtains. I said, I could not recollect their names, but I could see them before me, and that they were most abundant in the left ventricle. Dr. Paris. "These are very important parts, sir," and the Dr. was kind enough to assist me with the carneæ, and the columnæ followed; he gave me a like assistance with the chordæ and the tendineæ came. *I had been agitated about the Latin question,* and this may account for my loss of memory, but I had described them accurately in English.

Dr. Alderson. How is the brain supplied with blood?—*A.* The dura mater is supplied from four sources.—Dr. Alderson. Or first, give the branches from the arch of the aorta.—I did so. Dr. Alderson. The course and distribution of the vertebral artery?—I traced it through the foramina in the transverse processes of the six lower cervical vertebræ, I gave its branches, then the basilar; its branches; the branches from the internal carotid and the circle of Willis. Dr. Alderson. Do you know much about the tissues?—*A.* I have seen them all under the microscope. What is a cell?—I described it: nucleolus, nucleus, and cell-wall, with a fluid between. *Q.* How does a cell get rid of its contents?—*A.* Either by transudation, or rupture of the cell-wall, but very little is known about this at present; I think there are eight or ten different opinions about the constitution of the blood-corpuscle.*

Dr. Todd. I suppose you have dissected the brain?—*A.* Yes, but not very lately. Dr. Todd then gave the commissures, the velum interpositum, the tenia semicircularis, and some minor parts. The functions of the thalami and corpora striata, and the office of the gray matter.—These I described as in my first paper. Dr. Todd. How many orders of fibres are there in the crura cerebri?—*A.* Two. *Q.* Anything between them?—*A.* The locus niger. *Q.* How does this matter differ from the other gray matter of the brain?—*A.* I am not aware that there is any difference. — Dr. Todd. *The vesicles are caudate.* *Q.* How many lobes has the cerebellum?—*A.* Two. Dr. Todd. *No, three.*† *Q.* What are the functions of the

* Dr. Hughes Bennet, in his pamphlet on Inflammation, p. 17, mentions twelve different opinions.

† Bell says two, Wilson four.

cerebellum?—*A.* It is supposed to preside over motion, by some. Dr. Todd. You are aware of the experiments of Flourens.—*A.* Yes; I think, also, that Serres sliced the cerebellum, and thought he could make an animal turn to either side at pleasure. But I have seen a case lately where a great part of the cerebellum was destroyed, and there was no lesion of the motive power. Dr. Todd. *Not observed, you mean.**—*A.* It must have been very slight to have escaped detection. *Q.* What are the divisions of the medulla oblongata? —I named the corpora pyramidalia, the olivaria, restiformia, and the posterior columns. *Q.* How are the pyramidal and olivary bodies connected?—*A.* The former with the corpora striata, the latter with the thalami. *Q.* How are the ventricles lined?—*A.* With a proper membrane of their own. *Q.* Where is the velum interpositum?—*A.* It forms the roof of the third ventricle. *Q.* How is it connected?—*A.* With the plexus choroides.

I do not think I have omitted any important point. A very few questions of minor importance I did not answer quite correctly, but they related to parts that scarcely would be remembered for a month by any one, and could be of no practical utility.

Dr. Nairne. What are the membranes of the brain?—I named them. *Q.* What kind of membrane is the dura mater, the pia mater, and the arachnoid?—I described them all, naming their difference of structures and peculiarities as regards position, &c. *Q.* What are the sinuses of the brain?—I named them all. *Q.* How is the blood returned from the head?—*A.* By the external and internal jugular veins.

Dr. Sutherland. Name the foramina at the base of the skull?—I named them all, and commenced with the foramen cæcum, foramina cribrosa, foramina optica. Dr. Sutherland. I said the base of the skull.—*A.* I have always been taught that these foramina are at the base of the skull.—Dr. Sutherland. Well, then, go on with them. When I came to the foramen spinosum,—Dr. Sutherland,

* This was a man under the care of Dr. Christison, in the infirmary at Edinburgh, July 1848. I watched the patient carefully, and saw the brain removed by Mr. Goodsir, July 8th. The case will be remembered by several of the students, and if not already published will probably be so hereafter. I could, however, find numerous examples of this kind, if time would permit. I was not ignorant of the function assigned to this part of the brain by Gall, viz. that of sexual instinct, as my paper on Cerebral Affections (Lancet, March 7, 1840, Case 1, and general observations) will prove. But I did not mention this, as it is probable that the cerebellum has little or nothing to do with sexual instinct.

What passes through this foramen? — *A.* The middle meningeal artery of the dura mater. *Q.* What passes through the foramen rotundum?—*A.* The second branch of the fifth. Dr. Sutherland. The second branch? — *A.* Yes. *Q.* Give the nerves at the base of the brain.—I gave them all. *Q.* Describe the fifth nerve.— I was about to give its origin. Dr. Sutherland. Where is the ganglion seated?—*A.* On the petrous portion of the temporal bone. I then described the ophthalmic, but did not mention its orbitar branch; indeed, the examination was so loosely conducted, that I did not consider it necessary. Dr. Sutherland. What is the foramen over the orbit called?—*A.* The supra-orbitar foramen. *Q.* What the foramen below the orbit?—*A.* The infra-orbitar foramen. *Q.* What does the motor branch of the fifth supply?—I said, the muscles of mastication, and began with the buccinator. Something was said about my first paper, which I did not understand. Could Dr. Sutherland suppose that I had wrongly described paralysis of the portio dura when I said that the buccinator was affected?

I was now requested to retire, but before doing so, I asked the President if I might be allowed to make one remark about the Latin examination. I said I came up under the impression that if I possessed a competent knowledge of the Latin language it would be sufficient, and that nothing was said in their laws about the examination being conducted in Latin,* and that I thought that I did not claim this exemption as a matter of favour. I begged it to be understood that this remark was not made in an offensive spirit. Dr. Hawkins said I was mistaken, and on referring to the laws since I find the following:

" Præterea examinetur in Græcis literis ad Medicinam spectantibus, scilicet in Hippocrate, vel Galeno, vel Aretæo. Proponantur unicuique in primâ examinatione loci ex Aphorismis Hippocratis, vel è Galeno; in secundâ et tertiâ examinatione loci ex Hippocrate, vel Galeno, vel Aretæo, qui Latinè reddantur, et brevi commentario illustrentur. *Si quis autem in Græcis literis parùm profecisse videatur, is saltèm e Celsi vel Sydenhami operibus, vel quovis alio libro Latino ad Medicinam spectante, locum Anglicè reddat.*

" Singulæ Examinationes prædictæ Latinè fiant, et Anglice etiam, *si quando id visum fuerit Censoribus.*†

I said if I had known this, I could easily have prepared my Greek‡

* See page 12.

† Let me ask the reader why I had not the benefit of this exemption?

‡ I beg the reader again to bear in mind, that gentlemen fresh from the schools, only twenty-six years of age, are excused the Greek, but a man who has left school for twenty-six years is expected to speak Latin and also to answer questions in

and Latin, but I thought at my age I could employ my time better in the study of modern languages.

I left the room for a few minutes, and on my return the President said, "I have the pleasure to inform you that the Board is satisfied with your examination."

Second Verbal Examination on Pathology. Thursday, Dec. 21, 1848.

Dr. Paris. Hæc examinatio est in parte pathologica.—I said, I probably could answer some of the questions in Latin if the Board wished. Dr. Paris. Oh, you have been trying, have you?—I said, I had thought of a few questions an hour before I came to the College. Dr. Paris. What are the symptoms of dysentery?—*A.* Symptomata* dysenteriæ sunt dolor abdominis, tenesmus, tormina—but finding that the words were not likely to flow very fluently, I said I thought I had better proceed to describe them in English.

A. The chief symptoms are pain in the lower part of the abdomen, mucous, purulent, and bloody evacuations. The constitutional symptoms will vary according to the stage of the disease, and according to the amount of ulcerative mischief in the intestines. This disease is not unfrequently met with in combination with fever; I have seen several cases of this kind lately in Dublin. *Q.* What are the symptoms of scarlatina, say anginosa?—*A.* The eruption begins after an indisposition of two or three days, the time varying probably in different cases. Dr. Paris. Do you mean the period of incubation?—*A.* No, this probably would be eight or ten days, but the exact period is generally difficult to ascertain. The eruption is of an uniform red colour, with slight spots of a darker hue. The pulse is quick, and febrile symptoms are present. The throat is sore, the tongue red, and the papillæ raised on the tip and sides; the centre is generally covered with a yellowish white fur. The eruption appears first on the upper parts of the body, and remains out for three or four days. The skin, after a time, desquamates, and effusions of fluid may take place into the serous cavities, or into the cellular membrane, and these effusions often

Latin; although I think the printed laws do not lead to this inference. I may also remark that I have not given an exact verbal account of this examination, as many of the points are so simple that every tyro in the profession must be familiar with them. I have carefully considered all my answers, and, with the exception of a few unimportant points connected with the minute anatomy of the brain, I believe I did not commit an error.

* I had not seen Cullen's definitions for twenty years.

occur after the mildest forms of the disease. They are said to be inflammatory, but I have examined several children who have died of rapid effusion into the serous cavities, and I have found no evidence of inflammatory mischief.

Dr. Paris. Is not the urine albuminous?—*A.* Yes, in most cases, but not in all.

Q. What is the appearance of the eruption of measles, and how would you distinguish it?—*A.* It presents a spotted patchy appearance, the patches are irregular in form, and have been compared to flea-bites: they are slightly elevated. It is not so easy to describe these eruptions, although when often seen they cannot well be mistaken, except when they first appear. I have seen the eruption of measles in a few cases bear a great resemblance to smallpox when it first made its appearance. The state of the bronchial membrane, the suffused eye, and also the appearance of the face, will also greatly assist in the diagnosis.

Q. How would you distinguish the eruption of smallpox?—The hard knotty elevations which are observed on passing the fingers over the skin, are so characteristic, that I think one could generally distinguish the disease by the touch alone. Dr. Paris, with an approving nod: "Yes, shotty."

Dr. Alderson. Describe the progress of the disease.—I first asked whether it was genuine smallpox?—There is rigor, fever, pain in back and loins. The constitutional symptoms are more or less severe in different cases before the appearance of the eruption; infants are often affected with convulsions. The febrile symptoms are relieved as in most exanthematous diseases, when the eruption appears. The pimple gradually increases in size, and about the fourth day from its first appearance fluid is found in it. Dr. Alderson. As early as the fourth day?—*A.* Yes, I think so; and about the eighth or tenth they maturate, and after a day or two the pustules burst, and a scab is formed; but the time varies in different cases. Dr. Alderson. Is the throat affected.—*A.* Yes, pustules are generally present in the mouth and fauces. *Q.* How long are the symptoms of invasion present?—*A.* About three days; but no exact time can be fixed upon. *Q.* Is the period longer in the confluent than in the distinct species?—*A.* I am not aware that there is any difference. *Q.* What is the appearance of vaccinia (I understood Dr. Alderson to say)? I began to describe the vaccine vesicle, but Dr. Alderson said he meant varicella.—*A.* Chicken-pox appears in the form of small vesicles; little white bladders which

remain on the surface for four or five days only. There is generally very little constitutional disturbance present. Dr. Alderson. Is it not pustular?—*A.* One form of it, the swine-pock, is said to be so. Dr. Alderson. At what period would you take vaccine matter?—*A.* I have taken it as early as the sixth day, but I prefer the seventh or eighth; but this would depend much upon the progress of the vesicle. *Q.* What kind of vesicle would you prefer?—*A.* I should prefer a perfect vesicle; one that has not been rubbed or broken.

Dr. Todd. How would you distinguish a small quantity of fluid in the cavity of the pleura?—*A.* Œgophony probably would be present; but I have not heard this sound often. Dr. Todd. It is *very generally heard;**—I believe he said, always. *Q.* You have, I suppose, seen cases of chorea?—*A.* Yes. Dr. Todd. Describe the disease.—*A.* It is a spasmodic disease, generally affecting young persons under 15 or 16 years of age, and the great majority are of the female sex. It is attended with a peculiar twitching and spasmodic action of various muscles of the body. These spasms cease during sleep. Sometimes one side of the body only is affected. Dr. Todd. Is there anything peculiar about the tongue?—*A.* The tongue is tremulous, but I do not recollect anything peculiar about it. Dr. Todd. Is the speech affected?—*A.* There is a nervous condition, but I do not recollect anything peculiar about the speech. *Q. Are these patients of any particular habit of body?—A.* Yes, they are generally leucophlegmatic and deficient in power. *Q. What have you observed about them?—A.* There is often in girls of a certain age a bruit over the heart, and the venous murmur is not unfrequently present in the neck. *Q.* Are not the digestive organs often affected?—*A.* Yes. *Q. How is this bruit over the heart occasioned?—A.* Probably by the condition of the blood. *Q. How do you distinguish these murmurs from those arising from organic disease?—A.* In anæmic patients the bruit may be heard along the aorta; sometimes in the larger arteries. The venous bruit not unfrequently accompanies it. In organic disease the bruit is more circumscribed. *Q. How would you distinguish mitral-valve disease from that of the aortic valve?—A.* The character of the pulse would assist in the diagnosis; thus, in disease of the mitral valve it is more likely to be irregular. The situation of the bruit would also be a guide. In mitral valve disease it would probably be nearer the apex of the heart,

* I put this question, a short time since, to a physician connected with one of the largest hospitals in Dublin. How often have you heard œgophony? The answer was, "Very rarely indeed."

but, as Dr. Latham has observed, the end of a common-sized stethoscope nearly covers all the valves, and it is often very difficult to distinguish these bruits.* *Q. How would you distinguish regurgitant disease of the aorta?—A.* There is a peculiar pulse, and probably the only one pathognomonic† of disease of the heart. There is also bellows-sound present. *Q. Where is this bellows-sound?—A.* In the aorta. *Q.* Is it with the first sound?—*A.* Yes. *Q. How does it affect it?—A.* It so obscures it that it is not distinctly heard. *Q. In rheumatic fever, would you consider it necessary to watch your patient carefully?—A.* I should. (*I now fancied I discovered the drift of all this, and to use Dr. Todd's favorite expression, when speaking of the nervous system, I got into a state of polarity.*)

Q. What would lead you to suppose that the heart was affected?—A. If the rheumatic inflammation suddenly disappeared from a joint, and I heard a bruit or abnormal sound over the heart. *Q. Do you believe in the metastasis of rheumatism?—A.* Yes. *Q. What evidence have you of it?—A.* I have seen inflammation suddenly disappear from a joint, and I have heard a bruit over the heart soon afterwards; besides, the similarity of structures affected would strengthen this opinion. *Q. How would you distinguish this bruit from the anæmic bruit?—A.* If I had watched the sounds of the heart carefully, and found, after the sudden disappearance of the rheumatic inflammation from a joint, a bruit over the aortic valves, or over any part of the heart, I should conclude that a translation of the disease had taken place, especially if this bruit were confined to a certain spot. *Q. Might you not have other sounds present?—A.* Yes; the friction-sound, to-and-fro sound of pericarditis. *Q. Is this always heard?—A.* No. I have seen three cases lately, in which this disease was not detected. The sound may also be heard in the back‡ and not in the front of the chest. *Q. Does not the sound disappear, and then reappear in a few days?—A.* Yes, it may do so. *Q. What is the cause of this?—A.* Probably a fresh deposit of lymph takes place. *Q. Is there any other cause?—A.* Yes; the pericardium may be glued to the heart.

* The reader is aware that an account of the *normal* and abnormal sounds of the heart as described by different writers would occupy many pages. A man must be guided in a great measure by *his own experience.* Our perceptions of sound differ. I have recently met with a good example of this, and the case will be remembered by many. About eight or ten gentlemen applied their stethoscopes to a man's chest, and their opinions were about equally divided as to the existence of bronchophony. I could adduce numerous instances of this kind.

† I first heard this remark made by Dr. Bellingham.

‡ Dr. Watson's Practice of Medicine.

Q. What are the different forms of dropsy?—A. The inflammatory dropsy; mechanical dropsy, as in hardened liver, or obstruction of the blood through the vena portæ; and this in other parts may arise from obstruction of blood through a large vein. Dropsy also from disease of the heart. *Q. Is there not dropsy from another cause?—A.* Yes; kidney disease. *Q. What do you mean by inflammatory dropsy?—A.* The dropsy which occurs after scarlatina is said to be inflammatory; dropsy also into a serous cavity, as into the ventricles of the brain. I have seen a few cases of inflammatory dropsy of the cellular membrane, from exposure to cold; but I believe inflammatory dropsy is not a common disease. Dr. Todd.—*It is a very common disease, and was described by Dr. Blackall,* long before Dr. Bright's paper.—A.* I am aware of this; but so many opinions have been advanced of late respecting kidney disease, that I thought the matter was in an unsettled state.

Q. What would be the effect of dilatation of the right ventricle of the heart, and how would you distinguish it?—A. The effect would be to weaken the ventricle, and to produce a tendency to congestion of the bronchial membrane. *Q. What diseases would it produce?—A.* It might produce asthma and bronchitis. *Q. Is dilatation more frequently the effect or the cause of lung disease?—A.* Probably the effect. *Q. May it be the cause of dropsy?—A.* Yes. *Q. What kind of dropsy?—A.* Pleuritic and pericardial. *Q. Any other?—A.* Yes; it may produce anasarca and ascites. *Q. Would percussion assist in the diagnosis of dilatation of the right ventricle?—A.* I think not much, as the heart varies greatly in size in different cases. Dr. Todd.—*Oh, yes, it would. Where would you expect to find the apex of the heart in dilatation of the right ventricle?* I forget my answer, but I do not know now where it would be.†

Dr. Nairne. I suppose you have opened a "*few*"‡ bodies?—*A.* Yes, a great many. *Q.* In congestion of the liver what have you observed.—*A.* I have seen a large quantity of dark blood, and I have

* I have not been able to obtain Dr. Blackall's book, but I venture to predict that Dr. Blackall's notions of inflammation do not agree with those generally entertained by modern pathologists.

† I have a heart in my collection which probably weighs 20 oz., and I have seen one lately, in the Dublin University Museum, which weighed 45 oz. The right ventricle, I apprehend, would seldom be the only part enlarged.

‡ I have probably opened more bodies, and been present at the examination of more bodies, than Dr. Nairne.

seen the size of the liver considerably diminished* on the following day, from the loss of a portion of this blood. *Q.* But when you cut into the liver what appearance do you observe?—*A.* There is often a yellowish, mottled appearance. *Q.* What is the cause of this?—*A.* It is supposed that the yellow appearance is produced by the vessels containing bile. *Q.* Has not the vena portæ something to do with it? I think this was the question, but I forget how I answered it. *Q.* Are you not acquainted with Mr. Kiernan's researches?—*A.* Yes; and I have read Dr. Budd's book on the liver; but I think we have yet much to learn respecting the minute structure of this organ. *Q.* What are the symptoms of ulceration of the bowels during fever?—*A.* Pain in the abdomen, more or less acute; often tympanitis, diarrhœa, tenesmus, and sometimes bloody motions. *Q.* Are bloody motions common?—*A.* They are not common, but I have seen them often.† *Q.* Are not the evacuations watery?—*A.* Yes.

Q. How would you distinguish between the delirium of fever and that of delirium tremens?—*A.* In the latter the delirium is of a peculiar kind; the patients are restless; often fancy that animals of different kinds are in the room, and that they have odd things in their pockets. There is not the same amount of depression as in fever, and the delirium of fever is of a low, muttering kind.

Q. What is the appearance of the tongue in delirium tremens?—*A.* It is moist, tremulous, and often red. *Q.* Is it not covered with a white‡ fur?—*A.* I think it differs in different cases. *Q.* What kind of tongue have you in bowel§ affections? (I concluded that muco-enteritis was meant.)—*A.* The tongue is said to be red, and has been called the beefsteak tongue. *Q.* What is the character of pulse in scarlet fever?—*A.* It is quick, irritable pulse. (I of course meant in the first stage, and generally before the eruption.) *Q.* What is its frequency?—*A.* From 95 to 120. Thus, in a child of three years old, it may rise from 95 to 120; but it varies in different periods of the disease. *Q.*

* Dr. Lees and Mr. Lyons will recollect a very good example of this at the Meath Hospital, Dublin, Oct. 16, 1848, where the liver on the following day had probably lost 20 oz. in weight.

† During my residence in Edinburgh, and in Dublin, I saw a great deal of fever, especially in the latter city.

‡ "The tongue is sometimes furred, but moist, often but not in all cases tremulous."—Cyclopædia of Practical Medicine, p. 511. The tongue, probably, is in most cases furred, but I have seen it red and moist in several instances.—E. C.

§ The questions put by this Examiner were so indefinite and confused, that I came to the conclusion that he did not properly understand the subjects himself. I drew the same inference respecting Dr. Sutherland, in the anatomical examination.

Is it not often 140?—*A.* Yes. *Q.* Is it not a very feeble pulse?* —*A.* Yes; but not always. The pulse varies in character in this and other fevers. I have seen several cases of continued fever lately in Dublin, where the pulse has been but little increased in frequency. *Q.* Where would you most frequently expect to find fluid connected with the membranes of the brain?—*A.* Under the arachnoid; but it may be in its cavity, and in other parts. *Q.* What are the symptoms of inflammation of the heart?—*A.* May I ask what part of the heart, the muscular substance or the endocardium?—Dr. Nairne. Both.—*A.* I believe inflammation of the muscular structure of the heart to be very rare. I have seen cases of softening of the heart during fever, in which the first sound is obscure or absent; but this softening is probably not the result of inflammation. *Q.* What would lead you to suppose that the endocardium was inflamed?—*A.* The appearance of a bruit over some part of the heart, and sometimes the irregular action of the heart. *Q.* How would you discover the seat of this bruit?—*A.* I should be guided in some measure by the character of the pulse and the situation of the sound, although these are deceptive. *Q.* If the pulse suddenly became feeble and the heart's action irregular, what change, do you suppose, would have taken place?—*A.* Probably effusion into the pericardium. *Q.* How would this act?—*A.* By crippling the action of the heart.

Dr. Sutherland. Have you seen much of insanity?—*A.* No, but very little of it. Dr. Sutherland. *Oh, I thought perhaps you had in your travels?—A.* I have visited lunatic asylums, but I know but little of the disease. *Q.* What is the difference between acute mania and

* Craigie's Practice of Physic, p. 440, "rapid, strong pulse." But let not the reader suppose that I attach, generally, much weight to what are called *medical and surgical authorities.* Every practical man knows that the pulse varies materially in different stages of the disease, and in different cases. At the risk of being again charged with egotism, I will give one example (and I could adduce a hundred) of the fallacy of trusting to what would be considered authotities by some Examiners. In aneurism of the thoracic aorta, rupture into the pericardium was thought by medical and surgical *authorities* to be of very rare occurrence. Laennec never met with an example. Hope says "it is very rare," and Hodgson only mentions two cases. I have shown (and the facts are indisputable) that this mode of termination of aneurism of the thoracic aorta is the most frequent. Of 98 cases of aneurism of the ascending aorta, 30 opened into the pericardium.—(Structure and Diseases of the Blood-vessels, p. 134.) I think it probable that the mere quotation of my work would ensure the rejection of a student at one, if not more, of the Examining Boards.

phrenitis?*—*A.* In phrenitis, where the surface of the brain is affected, the delirium is often of a violent character, and more continuous than in acute mania. There is also more heat about the head and face, and more fever. In acute mania, I think there are more intervals of quiet, but I do not speak from experience, as these cases in private practice are seldom seen.

Q. What is the difference between a fit of epilepsy and hysteria?—*A.* Epileptic fits occur seldom more than once in a day; hysteric fits very often. In epilepsy, the countenance is suffused and bloated; there is foaming at the mouth; the tongue is thrust out and often bitten. A person who has seen much of epilepsy could scarcely mistake it for hysteria. In hysteria, the sex and constitution of the patient would be important guides. *Q.* Is not the face flushed in hysteria?—*A.* Yes, but not to the same extent as in epilepsy.

Q. Do you know anything about urinary deposits?—*A.* Yes. *Q.* What are these deposits?—*A.* Lithic acid, oxalate of lime, triple phosphate, and cystic oxide. *Q.* Is there not the lithate of ammonia?—*A.* Yes. *Q.* What appearance has the lithic-acid deposit under the microscope?—*A.* It is lozenge-shaped, and some of the crystals are long, but I don't know how many sides. Dr. Sutherland. Yes, how many sides?—*A.* I do not recollect whether four or six. I know very little about crystallography. *Q.* What is the colour of the lithic-acid deposit?—*A.* Reddish. *Q.* What appearance has the oxalate of lime under the microscope?—*A.* It is radiated.† *Q.* How would you detect the presence of the phosphates in the urine?—*A.* Nitric acid would dissolve them. *Q.* And the lithate of ammonia?—*A.* It disappears on the application of heat, and reappears when the urine cools. (I happened to mention the word albumen, but I forget in what man-

* I scarcely need remind the reader that there is no disease about which there is more difference of opinion than phrenitis. I quote the following from Craigie's Practice of Physic, p. 291, vol. ii.:—"The subject has since undergone revision and consideration with the aid of morbid anatomy, by Baillie, Rostan, Lallemand, Bouillaud, Abercrombie, Hooper, Bright, Andral, Carswell, and Cruveilhier; but, notwithstanding the researches of these authors, this question is involved in as much obscurity as before. It is to be observed, however, that this difficulty refers chiefly, if not altogether, to the necessary connexion between the external symptoms and the acute seat of the lesion, whether in the substance of the brain or in the membranes. It is, indeed, chiefly a difficulty in diagnosis, and which, from the nature of the subject, will probably remain long, if not always, in a most conjectural and uncertain state."

† I have not seen all these deposits under the microscope, and when I answered this question I thought of the lithate of ammonia.

ner. Dr. Sutherland. Yes; how would you distinguish albumen?—*A.* By heat and nitric acid. *Q.* Would you use both tests?—*A.* Yes. *Q.* Why?—*A.* Because two tests are better than one. *Q.* Any other reason?—*A.* I don't recollect ———. (I might perhaps have done so at another time, but I had had enough of it. The questions, as may be supposed, from the quantity of matter, were quickly answered.)

This examination, Mr. Sedgwick told me, lasted an hour and a half, and I believe the anatomical examination an hour at least. *The usual time is half an hour.* It is due to the Examiners to state, that although some of the questions were *peculiar*, they were put in a quiet, studied, gentlemanly manner. A schoolmaster could not have conducted an examination with more sedateness and propriety. There is one *peculiar feature* in this and the previous examinations, viz. that scarcely a question respecting *morbid* anatomy was given.

I was requested to leave the room, and, after an interval of about ten minutes, I was again summoned, and the President (Dr. Paris) addressed me in these words: "Dr. Crisp, we have given you a long examination, and the Board thinks that you have not shown a sufficient amount of *practical knowledge* to allow us to think that you ought to *emanate* as a Physician from this College. You are not rejected for your Latin, but for your want of *practical experience.*"

I replied, I should like my knowledge of Latin to be put to a better test than it had been; it had scarcely been tested at all. Dr. Paris.—Oh, this can't be done; (or something to this effect).

I said, "May I ask, sir, whether this opinion of the Board is unanimous?" Dr. Paris (with hesitation).—Oh ——— Dr. Todd.*—"*I don't think Dr. Crisp, sir, has anything to do with this.*" Dr. Sutherland. "Oh, Dr. Crisp can come up again in six or twelve months." I said, "Do you think, sir, I will ever appear at this Board again? I consider it an *honour* to be rejected by such men!"

The reader must recollect that this was said under what I *considered at the time, and I now think, circumstances of a peculiarly aggravating nature.*

On leaving the room, I begged Mr. Sedgwick, Secretary to the College, to preserve my papers, as I intended to publish the Examination. He replied, "Oh, your first papers were burnt on Monday." This was said in the presence of three gentlemen who were in the

* When I put this question I knew the President was not obliged to answer it, but I think Dr. Todd was not called upon to interfere.

room. Now these papers could not, I presume, be burnt without an order from the Examiners, and *it is therefore evident that, although they told me on Wednesday that they were satisfied with my examination, that they intended to reject me from the beginning*, as it is expressly stated in the laws of the College that the examination papers of the successful candidates are to be preserved.—"Hisce quæstionibus responsa ut literis illico mandentur, et inter annales nostros conserventur, curet Registrarius."

For the benefit of my readers, to whom the Examiners are not known, and in justice to myself, I may make the following statement. I had not seen any of the Examiners before, with the exception of Dr. Todd, and I first became acquainted with him in the manner to be hereafter mentioned.

Dr. Sutherland describes himself in the London Medical Directory, 1844, "as being specially engaged in the treatment of insanity." Dr. Todd's notions respecting the functions of the brain and nervous system, and particularly respecting the treatment of some diseases, are rather special and peculiar. Dr. Alderson has been but a short time in London; he is brother to the Judge, and has published the book alluded to at page 23. Dr. Nairne, I believe, has not favoured the world with any of his literary productions.

But before I take leave of this subject, let me ask the reader one question. If, a month before this examination, you had (in our mother tongue) put the above questions separately to the President and the four Examiners, how would these questions have been answered, and *how many different opinions would you have received?*

Let not the reader suppose that I am proud of this examination. I see much that I could add, and some parts that I would alter. I thought the examination would be a "*practical* one," and I preferred the record of my own experience to the dogmas of the schools.

The following correspondence has taken place since the examination.

1.

19, Norfolk Street, Strand;
Dec. 26, 1848.

Sir,—Immediately after my rejection on Thursday evening I asked you to preserve my papers, as I intended to publish the examination. Your reply was, "Your first papers were burnt on Monday." I then requested you to keep the remaining papers.

As I am anxious that my account of the examination should be as accurate as possible, you will oblige me by asking the President and Censors whether I may be allowed, in *your presence*, to compare my paper with the one you have at the College? An *early* answer will oblige,

Your obedient servant,

EDWARDS CRISP.

Mr. Sedgwick, Secretary to the College of Physicians.

2.

19, Norfolk Street, Strand;
Jan. 1, 1849—5 p. m.

Dr. Crisp begs to inform Mr. Sedgwick that he has received his card, and Dr. Crisp begs to decline any communication with Mr. Sedgwick *except in writing*. Dr. Crisp has received no answer to his letter of the 26th of December.

Dr. Crisp has also learnt that Mr. Sedgwick called.

3.

College of Physicians;
Jan. 4, 1849.

SIR,—Since you have declined hearing the communication which I was authorized to *read* to you, I am instructed to say that there is no answer to your letter of the 26th ultimo.

I am, Sir, your obedient servant,

J. B. SEDGWICK.

To Edwards Crisp, M. D.

The reader will observe that this letter is dated January 4th, but it was not received until half-past five on the 5th, as the post-mark shows. *On the morning of this day my advertisements for publication had appeared in the journals.* It will be also remarked, that I had *no intimation* that Mr. Sedgwick intended to *read* anything to me; but I hope I shall have the credit for possessing sufficient prudence and foresight not to have allowed any document to be read, unless in the *presence of a third party*. I am curious to know what this communication was—perhaps a lecture in Latin from the President? But *this* document I hope will be published.

Since the above was written I have received a communication from a gentleman who was a pupil of Liebig, and who has devoted his sole attention, for several years, to analytical chemistry. He says: "With regard to the questions—It is my opinion that Nos. 3 and 4 (third written Examination, page 32) are not, by any means, fair questions in a medical examination, considering the position which chemistry *now* holds in medical education. No. 4 is a question, the first part of which would not be answered even by a chemist; No. 3 involves two of the most abstruse and complicated subjects in chemistry."

In June, 1848, when my name was down in the College book for examination, I find the following questions:—In Physiology:

"1. What are the chemical, physical, and microscopic characters of the fibrin of the blood, and what purposes does it especially serve?"

In Pathology there are six questions, the first three are as follows:

"1. The symptoms and course of rheumatic fever?

2. The pathology of rheumatic fever?

3. The differential diagnosis between acute rheumatism and acute gout?"

I know not *when* these papers were printed, nor *by whom* the questions were put.

APPENDIX.—A.

March 17, 1845. I was requested to see Mr. ——— æt. 27, a barrister, living in chambers, of great promise in his profession, a friend and relative of my own. I had attended him for several years. He was a strong man, of temperate habits, and generally a *water-drinker*. His health had been good, with the exception of five attacks of rheumatic fever, which, although of a severe character, appeared not to have affected his general health. During these attacks (with one exception) he had always been bled from the arm. In the first illness Dr. W. bled him largely from the arm, on three successive days, with great relief. I attended him during a severe attack of rheumatic fever in 1844. I first saw him on the 31st of May. On the 5th of June, the pain being severe, and the pulse very full and strong, I bled him largely from the arm. On the following day, the 6th, the pulse being still hard and jerky, I hesitated whether I should bleed again from the arm. In the evening, when I called, I was surprised to find that he had lost about three pints of blood from the nose in a full stream; this bleeding occurred at intervals during the next five days, and the blood which I saw amounted to *five quarts*. This statement will surprise many, and will almost tend to throw discredit upon the rest of my narrative; but I believe the quantity of blood lost was more than I have mentioned. Those, however, who are acquainted with the diseases of females will not be so much astonished at this statement. The effect of these bleedings upon the disease was extraordinary; the patient was much reduced in strength, face blanched, pulse small and thready, but the pains in the joints, which had been very severe, entirely disappeared, and on the *20th of June he travelled a distance of ninety miles*. After this illness he was *stronger and better than he had been for many years*, and as a proof that his health was good, and his *heart not damaged*, he insured his life in a London office for £2000.*

On the 17th of March, 1845, I first saw him at the chambers of a friend, where he was dining; he complained of rheumatic pains in various joints, but these pains were evanescent; the pulse was rather hard and jerky, and I fully anticipated one of his old attacks, although at this time his spirits were good, and his general health not materially affected. I prescribed as follows:

℞ Ext. colocynth. comp. ℈j. Ft. pilulæ iv quarum sumat duas horâ somni.

℞ Magnes. sulph. ℥x,
Magnes. carb. ℈ij,
Spts. ammon. aromat. ℥iss,
Vini colchici, ℥ij,
Tinct. card. comp. ℥iss,
Aquæ menth. pip. ℥viij. Ft. mist. cujus sumt. sextam partem ter in die.

* I refused (upon principle) to answer the questions, the Directors not sending me a fee.

I saw him again on the 19th, and told him, if the pains were not relieved, I would bleed him when I next called. I prescribed the following:

℞ Sodæ sesquicarb. ʒij,
Vini colchici, ʒij,
Tinct. aurantii, ʒij,
Aquæ ℥viii. Ft. mist. cujus sumat sextam partem ter die.

℞ Vini antimonii potassio-tart. ʒj,
Spts. æther. nit. ʒj,
Liq. ammoniæ acetatis, ℥ss,
Mist. camphoræ, ʒx. Ft. haustus horâ somni sumendus.

On the 20th, the pulse being hard and full, I bled him from the arm; I forget the quantity, but I believe I took about 16 oz. of blood; he was very anxious to lose blood, knowing the benefit he had derived from bleeding on former occasions.

Rept. mistura ut heri.

℞ Potassæ nitratis, ℈j,
Spts. ætheris nitrici, ʒss,
Vini colchici, ʒss,
Mist. camphoræ, ʒx. Ft. haustus horâ somni sumendus.

On the 21st, the mixture and draught were repeated; and I conclude from this circumstance that the patient was as well as on the previous day, and probably better. *I did not take minute notes of this case, but all the prescriptions and letters can be seen by Dr. Todd or his friends.*

March 22d. The right knee-joint was extremely painful, hot and swollen, and had been so to a less extent for two or three days. The pains had nearly disappeared from the other joints, and the disease appeared to be *concentrated* in this part. The patient's strength not apparently reduced, and, contrary to my advice, he would remain out of bed, upon the sofa.

I ordered, I think, 12 leeches (the number in the prescription is not stated) to be applied to the knee-joint, and hot fomentations to be used afterwards.

℞ Mag. sulph. ℥j,
Vini colchici, ʒij,
Vini antimonii potass-tart. ʒij,
Aquæ, ℥viij. Ft. mist. cujus sumat sextam partem ter in die.

℞ Pulv. opii, gr. ij,
Pulv. ipecac. gr. ij,
Hydrarg. chloridi, gr. vj. Ft. pilulæ iv.

On the 23d, the same mixture was repeated, and ten grains of compound ipecacuhana powder given at bedtime. He complained of slight uneasiness over the region of the heart, not amounting to pain, and the breathing was a little quickened. I had often before applied the stethoscope to the chest, but heard no abnormal sound, nor could I detect any on this occasion. Two mustard-poultices were applied over the region of the heart as a precautionary measure. The diet during the last three days consisted of gruel, broth, beef-tea, jelly, &c.

On the 24th, I saw him early in the morning, and I did not leave his rooms until his death. The knee-joint was red, swollen, and the pain was excruciating; more so than he had ever felt it before, on this, or during his previous attacks. The pulse was quick and jerky, and there was no indication of want of power; my patient earnestly entreated me to take blood from his arm. I believe I was not influenced in the slightest degree by his wishes, but I bled him at once from the arm, and took about 16 oz. of blood. He was *bled out of bed*, in the erect position, and faintness

was not produced. The blood was cupped, and covered with a *dense* fibrinous coat, and the serum not abnormal in quantity. Dr. Todd saw this blood, and I *think* Dr. Bright also. The effect of this bleeding was a considerable mitigation of the pain in the knee-joint, and there was no apparent weakness produced by it. The pulse was reduced in power, *but I took no notes*, although almost every circumstance connected with the case is vivid in my recollection. I prescribed the following powders:

℞ Hydrarg. chloridi, gr. vj,
Pulv. colchici, gr. vj,
Antimonii potassio-tart., gr. j,
Sacchari, ʒss. Ft. pulv. vj, sumat unum 4tis horis.

℞ Pulv. opii, gr. ij,
Pulv. ipecac. gr. ij,
Hydrarg. chloridi, gr. iv. Ft. pilulæ iv.

I think two of these pills were given after the bleeding, and the remaining two were to have been taken at bedtime, but there is no direction to the prescription.

In the afternoon, or in the evening, I observed a decided change in my patient, and became for the first time alarmed for his safety. There was a circumscribed bellows-sound over the upper part of the heart; I *think* the breathing was also quickened; and there was occasionally slight subsultus tendinum at the right wrist. The pulse was small, feeble, but regular, and no friction-sound could be heard over the pericardium. I applied the acetum cantharidis over the region of the heart, and told the patient's brother that I should like another opinion. Dr. Addison was first sent for, but he being from home, Dr. Todd was called upon. He came in the evening (I forget the hour), and on seeing the patient, at once came to the conclusion that he was suffering from anæmia, and that the bellows-sound over the heart was anæmic. I told him that I did not think so, and I believed that a translation of the disease had taken place to the heart; for a perceptible change had occurred in the appearance of the knee-joint after the alarming symptoms manifested themselves. At this time the patient was quite collected, and answered all Dr. Todd's questions rationally.

Dr. Todd ordered a mixture with bark, ammonia, and opium; but the druggist who prepared this, has not the prescription, or a copy of it.

Dr. Todd also ordered port wine, with half an ounce of brandy, every half hour.

A large quantity of carded cotton and oilskin were sent for from the King's College Hospital, and the right extremity, from the foot to the hip, was enveloped three or four times in the carded cotton, and this was covered with the oilskin. It remained on until the time of the patient's death, and the effect *was abundant and profuse perspiration, so that the foot of the bed was soaked with moisture.*

The patient, after a few hours, became half unconscious and drowsy, with occasional muttering delirium. Dr. Todd saw him early on the following morning: ordered the stimulus to be continued, and the following medicine:

℞ Ammon. sesquicarb. gr. xxiv,
Tinct. opii, ♏xl,
Aquæ, ℥v. Ft. haust. iv.

℞ Quinæ disulph. gr. viij,
Acid. sulph. d. ♏xv,
Tinct. card. c. ℥ss,
Aquæ, ℥v. Ft. haust. iv.

These are copies of two of Dr. Todd's prescriptions. I think the medicine was to be changed according to circumstances.

Dr. Todd saw the patient again about twelve or one o'clock.

I was now anxious for another opinion, and wished Dr. Bright to be sent for. Dr. Bright was from home when the messenger arrived, and he did not see the patient, until four or five o'clock. Dr. Bright, on putting his stethoscope to the region of the heart, exclaimed, "Doctor, this is a very suspicious bruit;" and the following prescription, written by Dr. Todd, and dictated by Dr. Bright (after consultation), *will, I think, afford sufficient evidence of Dr. Bright's view of the case.*

℞ Hydrarg. chlorid. gr. j,
Opii purificat. gr. ss,
Mist. acaciæ, q. s. Ft. pil. 4tis horis sumend.

℞ Decoct. cinchonæ, ℥x,
Sodæ sesquicarb. gr. x,
Liq. opii sedativ. ♏x,
Tr. cinchonæ c. ℥j. Ft. haust. 3tia quâque horâ sumend.

Mar. 26, 1845. R. B. / R. B. T. } Dr. Bright's and Dr. Todd's initials, written by Dr. Todd.

Dr. Bright also wished the stimulus (wine and brandy) to be reduced to half the quantity. Our poor patient remained in a drowsy, muttering state, and died about eleven o'clock the same night.

On the following morning I received a note from Dr. Todd, asking me to endeavour to procure a post-mortem examination; (a request I had made myself.) Dr. Todd's note was sent with the subjoined, and cannot be found. I believe it was a mere request, without alluding in any way to the case.

1.

Copy of a Letter to ————.

Walworth; Thursday morning, March 27, 1845.

My dear ——,

I have just received the inclosed from Dr. Todd, and I think, if your father and mother do not *particularly object* to the examination, it would be desirable to have it performed. The body will *not be at all disfigured, and it will keep better after the examination.* I should not like to open the body myself, but Dr. Todd and my brother Fred. will perform the operation. Pray mention this to your father and mother, and let me know the result when I call (about 12 or 1).

Believe me, yours very sincerely,

E. Crisp.

P. S. I think it will be a great satisfaction *to all of you* to know the exact cause of death.

I sent the following to Dr. Todd:

2.

Copy of a Letter to Dr. Todd.

Walworth; March 27, 1845.

My dear Sir,

Soon after poor ————'s death, I mentioned the p. m. to his brother* ————, who arrived with his mother about an hour before he died, and he did not wish it mentioned to Mrs. ————, believing that she would not consent. I this morning also spoke to Mr. ————, who objected to the examination.

I have written† again this evening, stating that it would be a great satisfaction to his medical attendants to endeavour to ascertain the cause of death. I do not feel inclined to "cut up" his body myself, but my brother will perform the operation.

* [I had told Dr. Todd that this gentleman was a surgeon.]

† I inclosed your note

On carefully reviewing the case in all its bearings, I cannot believe that the loss of blood produced any of the unfavorable symptoms you attributed to it; especially when I take into account his good state of health, temperate habits, and great muscular power, but, above all, the benefit derived from bleeding* in *four* former attacks.

In his first attack, his mother tells me that Dr. W———— bled him from the arm (largely) for three successive days, with great relief. I find, on referring to my book, that the last attack commenced on the 2d of June, 1844.† I bled him largely on the 5th; on the 6th I hesitated whether I should take more blood from the arm, (the pulse being jerky, and rather hard, as it was on Monday last, before the v. s.)

On calling upon him in the evening, I was surprised to find that he had lost about three pints of blood from the nose (in a full stream). This bleeding occurred at intervals during the next five days, and the blood which I saw, amounted to *at least five quarts.* He, of course, was very much reduced; the pulse small and thready; the pains in the joints, which had been very severe, disappeared, and on the 20th of June he travelled a distance of ninety miles. After this illness he was *stronger and better* than he had been for many years.

If we are fortunate enough to obtain an inspection of the body, I prognosticate, notwithstanding the *absence of stethoscopic‡ signs*, pericarditis or endocarditis; great mischief about the right knee-joint, and probably serous effusion upon the brain. I give these opinions with deference, but with less hesitation than I should have done had I not watched the case very carefully, and had I not been well acquainted with the constitution of my patient.

Believe me, my dear Sir, yours very respectfully,

E. Crisp.

R. B. Todd, M.D.

I will call on the ———— in the morning, and if I obtain their consent, I will see you at your lecture.

The friends would not consent to the examination. Dr. Todd did not answer my note, but called at my house, I think on the following day; I do not recollect all the conversation that took place, but I repeated my views of the case, and I spoke of the enormous quantity of spirits the patient had taken.

I thought frequently of this case, and came to the conclusion, that inflammation of the mouth of the aorta, semilunar valves, and probably the contiguous endocardium, were the most likely morbid changes. I drew this inference for the following reasons: —the *circumscribed* bellows-sound over the mouth of the aorta, the sudden change in the pulse, and the *regularity* of its beat. I thought, if the endocardium had been more extensively inflamed, or if the pericardium had been affected, the heart's action would have been more tumultuous and irregular. I also thought, and I now think, that when the uneasiness was complained of, over the heart, on the 23d, that insidious inflammation commenced, and that lymph was gradually deposited about the mouth of the aorta, the semilunar valves, and probably the endocardium. The effect of this being to narrow the aortic orifice; a consequent feebleness of the pulse, and an imperfect supply of blood to the brain.§ I did not arrive at this opinion without consulting many authorities, and in January 1847, when writing on Aortitis,|| I said as follows: I quote the whole of the article, as I could not *fairly* allude to detached parts.

* I believe, also, in the great tolerance of the loss of blood in acute rheumatism in strong and healthy subjects.

† [He was first seen on the 31st of May.]

‡ [This remark was intended to apply to the absence of the friction-sound of pericarditis. The bruit over the heart was distinct enough.]

§ Since the above was written I have seen the following in Dr. Watson's 'Practice of Physic,' 1848, p. 674, vol. ii: "Neither is the intellect affected, except when carditis takes place, and then, as I stated formerly, violent delirium is apt to ensue, misleading the practitioner, drawing his attention from the chest, where fatal changes are in progress, and fixing it upon the head, where no inflammation at all exists, but which is disturbed through sympathy with the cardiac disorder. With this exception, we do not find patients in acute rheumatism *delirious.*" Let me refer the reader, also, to two fatal cases at p. 296, vol. ii; also to p. 679.

|| Structure and Diseases of the Blood-vessels, p. 24.

Aortitis.—The signs attending inflammation of the aorta are very obscure, and the diagnosis, consequently, extremely difficult. When the commencement of the thoracic aorta is affected, the symptoms usually described are increased and inordinate pulsation of the heart and aorta, great anxiety of countenance, a feeling of suffocation, dyspnœa, orthopnœa, and pains of a burning or tearing character, often accompanied by a sense of impending dissolution.

On reviewing the cases of aortitis reported by various writers, I find a great difference both in the duration and character of the symptoms, and I am driven to the conclusion that the disease is at present involved in so much obscurity, that in the majority of cases there are no indications of its existence. In three examples of supposed aortitis, related by Dr. Bright,* the patients were not affected with dyspnœa, and the presence of the disease was only suspected in one instance. In all Dr. Bright's patients there was a general tenderness of the skin. M. Bizot† mentions three cases which he witnessed: "In all there was an œdematous state of the trunk, arms, and face, attended with febrile excitement, but with no irregularity of pulse: the thoracic and abdominal aorta (especially the former) were red, and covered with a soft, thin, yellowish layer of albuminous exudation, easily detached, and giving a rough aspect to the inner membrane." Mr. Smerdon's‡ patient laboured under pneumonia of a severe character; extreme orthopnœa was present, the pulse was regular. One hundred and twelve ounces of blood were taken from the arm in five days.

The cases seen by Bertin§ were generally combined with endocarditis, and sometimes with inflammation of the lungs and pleura. The latter complication appears to be a very frequent one. Hodgson‖ met with three examples of this kind, and the Cases 44 and 48 in the table of the morbid appearance of arteries are probably of a similar description. The first was that of a gentleman whom I had known for some years, who was slightly affected with hereditary asthma, and who died under my care of pneumonia and bronchitis. The symptoms resembled those usually present in severe attacks of these diseases; and I was not led to suspect the existence of arteritis. My patient died three weeks from the commencement of his illness. The examination took place (January) sixteen hours after death. The inner and fibrous coats of the thoracic and abdominal aorta were of a dark red, inclining to purple: they presented a soft pulpy appearance, and were easily detached. The redness was not removed after they had been immersed in water several days. The body was warm at the time of inspection, and the blood in a fluid state. These circumstances, however, will not explain the phenomenon, as I have seen the arterial tunics perfectly free from stain under similar conditions.

Dr. Corrigan, in the twelfth volume of the 'Dublin Journal,' has published some cases of inflammation of the mouth of the aorta, which gave rise to symptoms resembling those of angina pectoris; and he thinks that aortitis should be enumerated as one of the causes of this affection.

It will be seen from the foregoing observations that the signs of this disease are so various, and its complication with heart affection is so frequent, that we can scarcely hope to arrive, in the majority of cases, at a correct diagnosis. The symptoms are generally urgent when the inflammation is seated near the heart; and it often extends from the lining membrane of this organ to the artery. Here many of the signs before enumerated will be present, and if the caliber of the artery, or the ventricular orifice should be diminished by the deposit of lymph, bellows-sound will probably be heard.

I have seen three patients during the last two years who, I believe, laboured under aortitis. Two of these were affected with rheumatic fever; the third was a policeman who had been exposed to cold: in his, and also in one of the rheumatic cases, orthopnœa, burning pain, and a sense of suffocation were present; these two recovered, but both of them are subject to occasional attacks of angina pectoris. The other patient, affected with rheumatic fever, was a young gentleman, who had suffered from this complaint at an early age, and had had five previous attacks. On this occasion the inflammation was confined principally to the knee, and the pain was of a very severe character. The duration of the disease was nine days. In the

* Hospital Reports.

† Mémoires de la Société Médicale d'Observation, vol. i.

‡ Medical and Physical Journal, vol. xlvi.

§ Traité des Maladies du Cœur et des Gros Vaisseaux, 1824.

‖ Before cited.

first stage the arterial excitement was very great; this was subdued, as it had been in previous attacks, by one bleeding from the arm, the application of leeches, and the administration of colchicum and tartarized antimony. Three days before his death he complained of slight uneasiness about the region of the heart, with quick pulse and hot skin. The heart's impulse increased, but the sounds normal. I bled him from the arm in the erect position, to about sixteen ounces (the blood buffed); no faintness was produced; he expressed himself relieved. I ordered the following:

Chloride of mercury, one grain; Powdered colchicum, one grain; Potassio-tartrate of antimony, $\frac{1}{8}$ of a grain. Every four hours.

In the evening he had subsultus tendinum in the hands and arms, and slight, circumscribed bellows-sound was heard over the upper part of the heart. Up to this time the cardiac sounds were frequently examined, and found normal. I met two physicians of eminence in consultation, one believed the unfavorable symptoms arose from anæmia, and ordered wine, brandy, opium, and bark to be given at short intervals; but our poor patient sunk on the following day. Unfortunately, no post-mortem examination was allowed, and therefore the exact cause of death must remain uncertain. I believe, however, inflammation of the endocardium, extending to the semilunar valves and mouth of the aorta, followed by the deposit of lymph, to have been the most probable.

Dr. Elliotson,* in speaking of aortitis, says, "I never opened a person who died of this acute affection; but four times I have suspected its existence when acute pericarditis was present. The only ground of my suspicions was the occurrence of a sound like that of a bellows, with the contraction of the heart." Further on he observes, "I have never opened a person whom I have seen labouring under chronic pericarditis, and affording the bellows-sound constantly, in whom a diseased condition of an opening or passage from the heart did not present itself; in whom the opening or passage was not below its natural proportion to the cavity behind it, being itself lessened or compressed, or the cavity behind it increased, so that it was become virtually too small."

These remarks, I think, are, with few exceptions, applicable to all examples of bellows-sound, when arising from mechanical obstruction to the passage of the blood. If produced, as in some cases of chlorosis and anæmia, by an impoverished condition of the circulating fluid, as well as by a laxity of the arterial tunics, the sound will be less circumscribed, and seldom, I think, confined to one spot, as in the instance alluded to.

A few days before the verbal examination at the College, I was *struck with astonishment* at seeing the following remarks, by Dr. Todd, in the 'Medical Gazette,' Oct. 6, 1848; Lecture V, p. 571, on the treatment of rheumatic fever. The only alteration made is, that certain words are put in italics.

"Treatment.—I think the most instructive way in which we can discuss the treatment of this disease, will be for me to enumerate the various methods which have been proposed for this purpose, and to point out the reasons for rejecting some and for adopting others. As many as seven different plans may be specified, of which I shall place last that which I am in the habit of following here, and which I call *the treatment by elimination.*

"The first plan is that by venesection. It was thought by many, and still, unfortunately, is thought by some, that when called to a case of rheumatic fever, they have only to open a vein, and, if they succeed in taking away a sufficient quantity of blood, which, in many instances, they think should be little short of two or three pints, that they may by this large and rapid abstraction of blood cut short the disease, and convert a malady which ordinarily lasts some weeks, into one of a few days' duration. Frequently, not content with one large bleeding, they will pursue the practice, and bleed a second, a third, or a fourth time, at short intervals, and in large quantities.

"The great advocate of this practice at the present day is Bouillaud, of Paris;

* Lumleyan Lectures, p. 13.

now, if you look through the record of his cases as given in his book, you will see that his patients, although some of the more urgent symptoms are apparently very quickly overcome, *yet linger on in the hospital for a considerable period, suffering much from chronic rheumatism, and exhibiting an extreme anæmia, from which they but slowly, if ever, recover.* This plan of treatment has been advocated by some English physicians, and among others, by the celebrated Sydenham, who, however, in the latter part of his career, abandoned, or greatly moderated it, and, I am happy to say, the number of its supporters at present is very small. It is a practice from the adoption of which I would most earnestly dissuade you, as having the support neither of reason nor of experience, and as being fraught with the most dangerous consequences to your patients.

"I could tell you of several cases in which a fatal result had been *clearly* produced by the adoption of this method of treatment, which most probably *would have recovered completely had they been let alone, or treated by a milder method.* One case in particular made a deep impression upon me. The subject of the case was a young and strong man, of great promise in his profession; he was seized with rheumatic fever, and one of the knee-joints was severely affected. *On a previous occasion*, a similar attack seemed to yield readily to a *very large bleeding*, and the patient recovered. His medical attendant, naturally enough, determined on the *second* attack to adopt the same treatment, which had seemed so successful before, and accordingly bled him *very largely*, and applied leeches to the inflamed joint. *The result was violent delirium; and death by exhaustion in the course of eight-and-forty hours.*

"I would go so far as to say, that even were we certain that venesection would produce the desired effect on the leading symptoms of the disease, we should yet hesitate ere we make use of a remedy which, in the *general* effect it may have, is most uncertain and most perilous; in one case you may relieve your patient; in another you may send him to a premature grave; or in the same individual, *in a first attack, you may obtain complete relief by this method, and in a second attack you may kill him.*"

Let me request the reader to look again at my letter to Dr. Todd (Dr. Todd knew *that this gentleman had a brother in the profession*). This was the *sixth attack*, and in the fifth, as Dr. Todd had been told, the large bleeding was *spontaneous.* The patient in the last illness did not lose more than *two pints* of blood; there was nothing like "*violent delirium*" at any time, and Dr. Todd's statement that death was occasioned by exhaustion, in 48 hours, *is entirely opposed to Dr. Bright's opinion;* and why, let me ask, did Dr. Todd put his name to a prescription in which *a grain of calomel was ordered every four hours, if he thought the patient was suffering from the effects of anæmia?* But let me especially ask, what the effect of the profuse discharge of serum (occasioned by the carded cotton) would be upon a patient in this condition? *It may be found hereafter, by practical men, that this mode of depletion, by producing a disproportion between the serous and crassamentous parts of the blood, may be the most injurious that can be pursued.* No such inference as that stated by Dr. Todd can be drawn from Bouillaud's cases.

In the 'Traité Clinique du Rhumatisme Articulaire et de la Loi de Coincidence des Inflammations du Cœur avec cette Maladie,' par J. Bouillaud, Professeur de Clinique Médicale à la Faculté de Médecine de Paris, Membre de l'Académie Royale de Médecine, &c. 1840, 39 cases of acute rheumatism are recorded: 3 of the patients had organic lesions of the heart from old rheumatic attacks. The 36 cases are divided into 3 classes, according to the intensity of the disease. Sex: 29 men, 6 women. Age: 24 from 15 to 24 years; 8 from 25 to 35; 3 from 35 to 45; and one 48. *Not one of these cases terminated fatally, and not one passed from the acute to the chronic stage.* In 28 subjects of the first class, 21 had endocarditis or pericarditis, more or less marked. In one case, aortitis ap-

peared to exist with the endocardial rheumatism. The 36 patients were bled 136 times (de 3 à 4 palettes pour la plupart). The 136 bleedings furnished 106 lbs. 2 oz. of blood: the maximum being 6 lbs. 6 oz.; the minimum 8 oz. In 14 cases of the first class, convalescence commenced on the 5th day from the time of admission (taking the average). In 18 cases, in the second class, on the 6th day. Twenty patients were 26 days in the hospital, and on leaving, their health was perfectly re-established. In 6 of the severe cases, the patients were from 32 to 33 days in hospital. The first 14 were 23 days in hospital. One patient remained 64 days in the ward. Subjoined are the outlines of Bouillaud's first 5 cases of *acute* rheumatism, page 380:

75th case	8	bleedings in	5	days,	6 lbs. 4 oz. of blood taken,	convalescent	7th day.
76 „	7	„	4	„	7 lbs. 2 oz.	„ „	6th „
77 „	6	„	3	„	6 lbs.	„ „	6th „
78 „	7	„	4	„	5 lbs. 4 oz.	„ „	5th „
79 „	6	„	3	„	4 lbs. 14 oz.	„ „	5th „

In case 85, a young woman of chloro-anémique habit, there was a bruit de souffle over the region of the heart, and the bruit de diable in the right carotid. This patient was bled, generally and locally, 6 times in 3 days, and was convalescent on the 7th. See also, cases 91, 92, 97, 108, 112, 113; especially cases 114, 117."

The above cases show the *great tolerance* of the loss of blood in this disease. Let not the reader suppose, however, that I would recommend Bouillaud's treatment. I have seldom thought it necessary to bleed in acute rheumatism, but in this particular instance the circumstances were peculiar. I thought I had the advantage of precedent, and I thought also, judging from the spontaneous bleeding in the last attack, that I was following Nature's path.

I quote the following also, to show the great tendency to endocarditis in acute rheumatism. Dr. Latham, in his Clinical Medicine, vol. i, p. 143, says: "Between the years 1836 and 1840, both inclusive, there occurred under my care, at St. Bartholomew's Hospital, 136 cases of acute rheumatism. Of these 136 patients 75 were males, and 61 were females; of the 75 males, the heart was affected in 47, and unaffected in 28. Of the 47, the seat of the disease was the endocardium alone in 30; the pericardium alone in 3; and both the endocardium and pericardium in 7. And while the heart was undoubtedly affected in 7 others, the exact seat of its disease was uncertain. Of the whole number of males in whom the heart was thus variously affected, 3 died; and in these three the pericardium and the endocardium were both inflamed."

Reader, do not suppose that I am presumptuous enough to believe that I may not have erred in the treatment of this case. In the dark and uncertain state of our art, no man can be positive as to the correctness of his treatment in any instance. How often must the conscientious man ask himself, after the cold hand of death has seized his patient, "Would any other mode of treatment have prolonged life, or effected a restoration to health?" How often has the scalpel revealed our ignorance, and how truly does it teach us, that the practice of medicine, without its aid, is little better than *quackery and empiricism.*

I now take leave of the reader for the *present.* The step I have taken is a bold one, and I believe without precedent. I have followed my own course, unadvised and unassisted; but whatever the consequences it may entail upon myself, I have the consolation to believe that it may be of service to the profession at large.

APPENDIX.—B.

Examination at the University of St. Andrews, Scotland,

AUGUST 1, 1848.

I PUBLISH these Examination Questions, believing that they may be interesting to the student and junior practitioner. The questions were written immediately after the examination, and were sent to a medical friend, who took a copy of them, which is now in his possession. The reader will observe that a good knowledge of Surgery is required at this University, and that the Examiners are quite equal to those who examined me at the London College of Physicians. The Examination, by some, may be considered *more practical.* Let not the reader suppose, however, that I am in love with the Scottish Universities. I shall be able to show hereafter that, probably, more favouritism and corruption exist in Scotland than in this country, and that some of the evidence given before the Parliamentary Committee upon the Scottish Universities is not to be depended upon. (Lancet, Jan. 13, 1849.)

Translate into English, in writing, the following:

" Sitis, non secus ac fames, aliquando deficit, aliquando nimia observatur. Defectus ejus vix morbosus habendus est, dummodo valetudo cætera secunda fuerit, et concoctio cibi bona; nimirum, quia tunc verisimile est, corpus potu non egere. Sunt qui nunquam sitiunt; homines, scilicet, constitutionis corporis humidæ, fluidoque cibo utentes, quibus copiosior oris humorum secretio nunquam sinit fauces arescere." —GREGORY'S *Conspectus Medicinæ.*

ANATOMY AND PHYSIOLOGY.

Examiner: Dr. JOHN READ, Professor of Anatomy and Physiology.

(*These were written questions.*)

What vessels are connected with the right auricle?
Name the valve between the right auricle and ventricle?
Name the valve between the left auricle and ventricle?
Name the contents of the chest?
What is the difference between the two lungs?
The contents of the posterior mediastinum?
The lobes of the liver?
The situation of the stomach?
The situation of the liver?
The situation of the kidney?
How is the kidney covered? and where is the urine secreted
What is the difference between the male and female pelvis?

What are the ligaments of the liver?

How does the surface of the cerebellum differ from that of the cerebrum?

What are the membranes of the brain?

What nerves pass through the foramina at the base of the skull? (A skull was given to me.)

Describe the eye and its coats?

What nerves enter the orbit, and how are they distributed?

What are the coats of the intestines?

Name the intestines, large and small?

What ducts form the ductus communis choledochus?

Where does the ductus communis choledochus terminate?

Give the symptoms of paralysis of the portio dura?

Paralysis of the fifth nerve? Its motor branch?

What are the bones which enter into the composition of the knee-joint?

What of the ankle-joint?

Branches of the common carotid?

Branches of the arch of the aorta?

First branches given off from the aorta?

What are the sensitive nerves of the face?

What the motor nerves?

MATERIA MEDICA.

Examiner: Dr. SELLAR, Physician to the Royal Infirmary of Edinburgh, and Lecturer on Materia Medica.

Which of the salts of potash are diuretic?

What is nitrate of potash—its use in medicine?

What is a deliquescent salt, and what an effervescent; and how are these changes effected?

What is squill? Name the plant (natural and Linnæan order).—Where brought from?

What part used, and the menstrua; its preparations? Find specimen in the box.

What is colchicum—class and order (natural and Linnæan)? What part used? What its active principle, and how is it supposed to benefit in rheumatism and gout? Dose of the tincture; and what its effects if long continued? Find it in the box.

Digitalis—class and order; part used; dose of infusion—of tincture? How do they differ in their effects? Find the leaf in the box.

(A box, containing drugs and various specimens of the materia medica, was on the table.)

PRACTICE OF MEDICINE.

Examiner: Dr. ANDERSON, Professor of Physic in the University of Glasgow, and Lecturer on the Practice of Medicine in that University.

What is inflammation of the heart?

Where does it most frequently occur?

What do you mean by metastasis of inflammation in acute rheumatism?

In gout? What organ is most frequently affected by metastasis?

What is gastralgia?

If in a female, what would you especially direct your attention to?

What is pyrosis?

What the cause of it?

What do you mean by irritation of the stomach?

What auscultatory signs would lead you to suppose that tubercle is about to be deposited in the lungs?*

CHEMISTRY.

Examiner: Dr. Wilson, Lecturer on Chemistry, Edinburgh.

What is an acid?

Are all acids sour? Is prussic acid sour?

What is hydrochloric acid? How obtained?

What are its salts called?

What appearance has it? And smell?

How would you detect it?

What is its composition?

How do you obtain chlorine?

What are its properties? Its colour and smell?

Sulphuric acid, how obtained? What are its salts called?

How would you detect sulphuric acid?

What its colour, and what are its characteristics?

What its composition?

Atomic numbers of sulphur, oxygen, and nitrogen?

Nitric acid, how obtained, and the decomposition?

The tests for nitric acid?

What is its composition?

What its symbol, and how written?

How would you express the quantity of oxygen in a compound body?

SURGERY.

Examiner: Dr. Argyle Robertson, Lecturer on Surgery, Edinburgh.

The symptoms of concussion of the brain? How treated?

The symptoms of compression of the brain? How treated?

If the patient had a *punctiform* fracture of the skull, and no symptoms existed (of compression), would you use the trephine?

What causes produce compression of the brain?

Where do extravasations of blood (spontaneous) most frequently occur in the brain?

Their cause?

In injuries of the brain, where there is rupture of the substance, do convulsions follow?

Write a prescription for a diuretic draught; also for a diaphoretic draught; the Latin at full length.

* The reader will not be surprised to hear that I had some difference of opinion with the Examiner respecting this question.

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